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JANUARY/FEBRUARY 1982

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HOLMES SAFETY ASSOCIATION
E PLURIBUS UNUM
SAFETY EFFICIENCY
MINERAL INDUSTRIES

BULLETIN

"SAFETY"
It's Up to You,
In '82

MSHA

L 38.12:

HOLMES SAFETY ASSOCIATION

in this issue....

JANUARY/
FEBRUARY 1982

1. Holmes Safety Address/Telephone Changes
2. Introduction--Welcome to New Chapters
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4. Safety Topic, "Mind Safety"
5. Abstract, "Powered-Haulage Accident/Locomotive"
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7. Safety Topic, "Child's Affidavit"
8. Pre-Shift Inspection Program for Mobile Surface-Mining Equipment
9. Coal Mine Fatalities/January-November 1981
10. Safety Topic, "Fundamentals of Accident Investigation"
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14. Safety Topic, "Lost Tempers Cause Accidents"
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16. Safety Topic, "He Used to Be"
17. Safety Topic, "Fatalities Related to Safety Belts, Safety Lines, or Lanyards, 1978-1979"
18. Safety Topic, "The Last Word"
19. Poster, "Good Supervision"
20. Meeting Report Form (chapters only)

"CONGRATULATIONS JACK"

The Holmes Safety Association poster, "Mr. Jack Safety" was awarded honorable mention in the international poster competition at the Second International Symposium on Training in the Prevention of Occupational Risks in the Mining Industry held November 9-13, 1981, in Washington, D.C. It was the only United States Poster entry to receive recognition in this competition.

United States Department of Labor
MSHA
Mine Safety and Health Administration

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HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Introduction

Welcome to the 230 new chapter members established in 1981. It is a pleasure having you as a member of the Holmes Safety Association. We hope you have been taking full advantage of the safety topic material your membership provides.

Our compact monthly Bulletin includes numerous safety topic materials for on-the-job safety meetings. The Bulletin has been simplified. Please note the monthly meeting report form, which we ask that you complete, tear out, fold and return, postage-paid.

This is a landmark year--the 60th anniversary of the Holmes Safety Association. From its introduction in 1922, the Association has become a supreme safety organization, assuring to the mining, mineral extractive and allied industries a high level of safety personal services nationwide.

This concept has not changed in six decades. The world has changed; more employees are now traveling further and more often. The pace has quickened with less time for the most important phase of our job--Safety Meetings. As a result, accidents and serious lost-time and disabling injuries continue to climb.

To assist you in these changing times, the benefits of the "Bulletin," as a safety leader, should save you and your employees time and effort and provide educational safety material at most levels of your mining operation.

In 1964, there were about 200 safety chapters, the greatest number in Pennsylvania coal mines. To date, there are 1,727 chapters covering metal, nonmetal and coal mines in 44 states. This is indicative of only one aspect of how the Holmes Safety Association services has increased during the last six decades.

We appreciate your past and continued membership and support. In the months and years to come, we will continue to expand the Association and also to search for ways to increase the value of safety material to you. Keep up the good work. Hold your safety meetings and let us know about them. Safety pays for itself and costs you nothing in the long run.

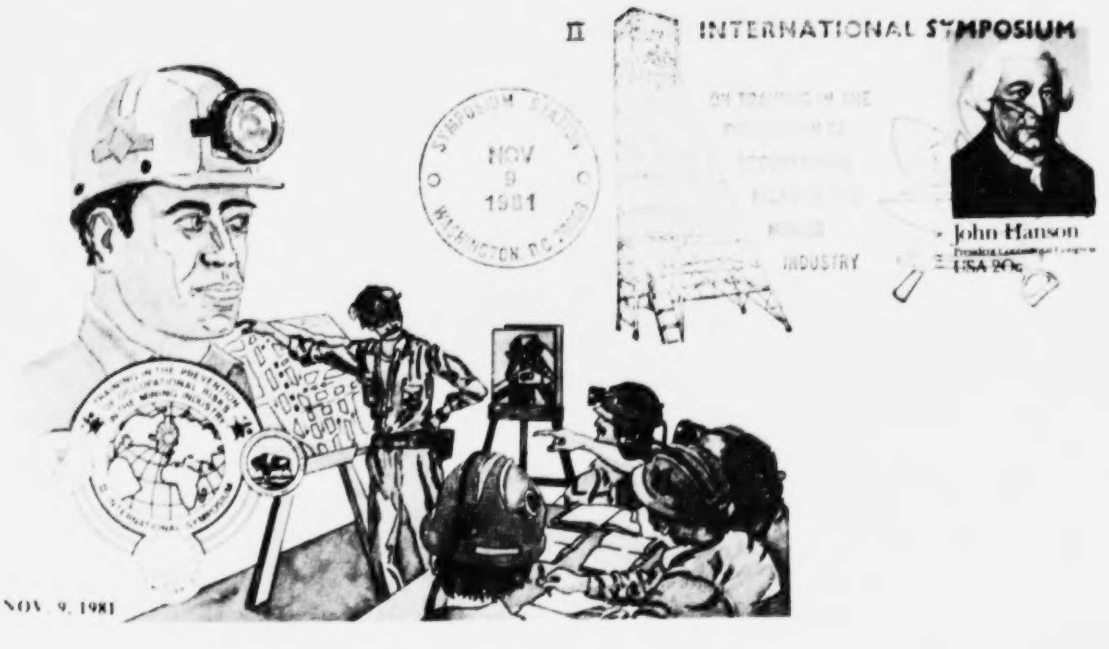
W. H. Hoover

William H. Hoover
National Secretary
Holmes Safety Association

INTERNATIONAL TRAINING SYMPOSIUM MEMORABILIA

A special postal commemoration of this Symposium has been developed. It is a cover commemorating the II International Symposium on Training in the Prevention of Occupational Risks in the Mining Industry and contains a special Washington, D.C., cancellation recording for all time an important event for the worldwide mining industry. The artist, Mr. Olin P. Keyes, Jr., has produced an extraordinary four-color cachet which is truly a work of art.

These covers can be purchased by sending a check or money order payable in U.S. funds in the amount of $1.50 for each or $3.50 for three to: Mine Safety and Health Administration, 4800 Forbes Avenue, Pittsburgh, Pa. 15213, U.S.A.; Attention: Janet Earhart. Please include a self-addressed stamped envelope (#10).


II INTERNATIONAL SYMPOSIUM
ON TRAINING IN THE
INDUSTRY
SYMPOSIUM STATION
NOV 9 1981
WASHINGTON, D.C.
John Hanson
USA 20c
NOV. 9, 1981

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Mind Safety

To alter our caption of "Mine Safety" with one letter change, it is possible to see exactly where the real responsibility for safety lies. It is ours as individuals to live and practice this basic need for self preservation. By doing this daily, we are able to teach others correct methods of performing our job in a safe and efficient manner.

The mind is the governor of our actions, it must always be alert and ready to act when the unexpected arises. The welfare of our families, co-workers and ourselves is at stake. We can wisely ask:

"Do I have the right to gamble the happiness and future of those who depend on me against the small effort required to do the job safely?"

"Six Murderous Beliefs" as stated by Ned H. Dearbon should never be allowed to enter our minds and let alone to dominate our actions. They are:

1. The "Other Fellow" Concept. Assuming that accidents only happen to the other fellow who is not as smart as we are.

2. The "Your Number's Up" Concept. The philosophy that accidents just happen or they don't.

3. The "Law of Averages" Concept. That a certain number of persons are doomed despite reasonable precautions.

4. The "Price of Progress" Concept. Natural price paid for progress, or the Cost of Modern Living.

5. The "Spirit of '76" Concept. That safety precautions are inconsistent with the spirit of our forebearers.

6. The "Act of God" Concept. Accidents are an act of God, inflicting divine punishment on us and our loved ones.

It has been found that accidents assigned to these classifications are also preventable through well-administered safety programs.

ABSTRACT
FROM
FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Powered-Haulage Accident

General Information: A fatal powered-haulage accident occurred in a section entry resulting in the death of a locomotive [illegible]. The victim had four and one-half months mining experience, the last two of which were as a locomotive operator trainee.

Description of Accident: The second shift material crew, under the direction of the face supervisor, began their normal work shift. After loading a [illegible] trip of supplies, the motorman pulled the supply trip into the main entry with [illegible] locomotive. The victim followed the supply trip on [illegible] locomotive [illegible] but the [illegible] material trip which was [illegible] to the section, which was [illegible] grade.

The material trip was then [illegible] station located about [illegible] feet outby the section. The motormen were in the process of checking and filling the sanders on their locomotives when the track foreman approached the material trip and asked the victim if they had troubles. The victim said he was cleaning wet sand out of the sanders. He then proceeded to the lead locomotive and asked the lead motorman if he was ready to go. He replied that they were waiting for clearance as some switching was being done at the first south switch.

When clearance was obtained, the train continued along the first south haulage stopping just inby the 1 west switch. The lead motorman instructed the victim to wait there until he cleared the 1 west hill. The train proceeded on. The lead motorman was leaning over the back of the operator's compartment hand sanding the left rail. As he approached the top of the hill he saw a flash coming from the back of the locomotive and the wheels started to spin. He lost control and the train traveled downgrade where it collided with the victim's locomotive at the bottom of the hill. The victim had apparently followed the material trip instead of waiting as instructed. The lead motorman ran to the rear of the wrecked material trip where he saw the victim pinned between the second car and a transformer located [illegible]. He then ran to a telephone outby the wreck and summoned help.

Co-workers were immediately dispatched to the accident scene where one [illegible] observed a high-voltage cable pulled down by the wrecked [illegible] and told everyone to stay clear until the cable was deenergized. The victim was examined for vital signs and removed from the wreck.

Cause of Accident: The accident occurred due to the failure of management and employees to adequately maintain locomotive sanding devices and to provide a brake car, trailing locomotive, drag or [illegible] devices to stop runaway trains on ascending grades. Contributing was the failure to determine maximum safe load limits.

ABSTRACT
FROM
FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Powered-Haulage Accident

General Information: A miner was fatally injured during an attempt to rerail a track-mounted mechanical mucking machine. The victim had been employed at this mine, an underground copper mine, for about two years. He had received miner's training, served in the miner's position for approximately 6 weeks and had been classified as a drill miner 19 days prior to the accident.

Description of Accident: At the beginning of the shift, the victim and his partner were assigned the job of rerailing a derailed mechanical mucking machine. The men and a development foreman worked throughout the first half of the shift without success, trying several different methods for rerailing the machine. An additional crew of two construction miners were assigned to assist with the operation.

The four miners and supervisor attempted to raise the mucker again by using a 6-foot long 6- by 8-inch timber as a lifting strut between the coupling of a mine flat car and the elevated boom of the flight conveyor. This practice consisted of placing a timber lengthwise at an angle between the car and the machine while advancing the car with two battery powered locomotives until the machine lifted.

The timber was not long enough to produce sufficient lift to rerail the mucking machine so the motors were reversed to relieve the lifting force. When this was done, the pressure between the battery motor and flat car coupling was also released and the weight of the mucking machine and conveyor on the timber on the opposite end caused the flat car to tip up and out of the motor coupling. As the car uncoupled, the angle of the timber caused it to rotate and pin the victim against the side of the drift.

At the time of the accident, the flat car was carrying a single built-up "pocket-rail" and had two 2-1/2 inch diameter by 29-inch length steel pipe car stakes inserted in side pockets on the bed. One of the stakes pinned the victim and compressed his chest until he was unable to breathe.

Cause of Accident: The direct cause was failure to remove individuals from hazardous locations while attempting to rerail the mucking machine. Contributing causes were the use of the relatively light weight flat car for rerail of the heavier mucking machine and the victim positioning himself in an unsafe location during the process while failing to heed warnings from more experienced miners.

Recommendations: Alternate means for rapid rerailing of heavy equipment and mine cars should be explored.

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

CHILD'S AFFIDAVIT

I, ...(SON, DAUGHTER)...................................., HEREBY AUTHORIZE MY (FATHER, MOTHER) TO WORK WITHOUT WEARING GLOVES, HARD HAT, GOGGLES, SAFETY SHOES OR ANY OTHER SAFETY EQUIPMENT AND HEREBY PROMISE THAT I WILL, WITHOUT COMPLAINT, PERFORM THE FOLLOWING DUTIES IN CASE HE/SHE IS BLINDED OR CRIPPLED:

1. LEAD MY (FATHER, MOTHER) WHEREVER HE/SHE WANTS TO GO.
2. HELP MY (FATHER, MOTHER) DRESS AND EAT.
3. DESCRIBE THE SCENERY TO HIM/HER ON OUR VACATIONS.
4. READ TO MY (MOM, DAD).
5. TRY TO TAKE OVER AS MANY OF MY (FATHER'S, MOTHER'S) HOUSEHOLD DUTIES AS I CAN WHILE AT THE SAME TIME DOING CHORES AROUND THE YARD.
6. HELP MY YOUNGER SISTER AND BROTHER WITH THEIR HOMEWORK.
7. DESCRIBE OUR CHRISTMAS TREE EVERY YEAR AS WELL AS MY GRADUATION AND WEDDING CEREMONIES TO MY (FATHER, MOTHER).

SIGNED ....
(CHILD'S NAME)

PRE-SHIFT INSPECTION PROGRAM

FOR MOBILE SURFACE-MINING EQUIPMENT

Research has shown that many accidents involving mobile surface-mining equipment occurred because machines were often operated without proper maintenance or servicing. In addition, it was discovered that many machine operators did not know how to check for the resulting defects, or know how to correctly use personal protective equipment. Pre-shift safety-inspection training modules were developed to provide ten short training programs for operators of the wide variety of mobile equipment in use.

Each of the ten 25 minute training modules consists of a set of 35mm slides, a synchronized narrative on tape, and handout cards. The generic machines covered by nine of the modules are (regardless of manufacturer): bulldozers, front-end loaders, scrapers, service tractors, diesel-electric haulers, diesel-electric loaders, motor graders, diesel off-highway haulers and highway-rated haulers and service trucks. A tenth program instructs machine operators in the correct use of personal protective equipment.

DEPARTMENT OF LABOR • UNITED STATES OF AMERICA

The original research was done, and the training modules developed and supplied to the Mine Safety and Health Administration by Woodward Associates, as part of a Bureau of Mines contract. The modules were field evaluated and found to be helpful in developing safer work habits. They were highly regarded by operator-trainees and mine training officials. The materials are now being used by mine operators to satisfy miner training requirements.

All audiovisual materials listed herein are offered for sale only, and the prices (determined by contractual reproduction costs) are subject to change without notice. To obtain audiovisual materials, please submit a written request or purchase order to:

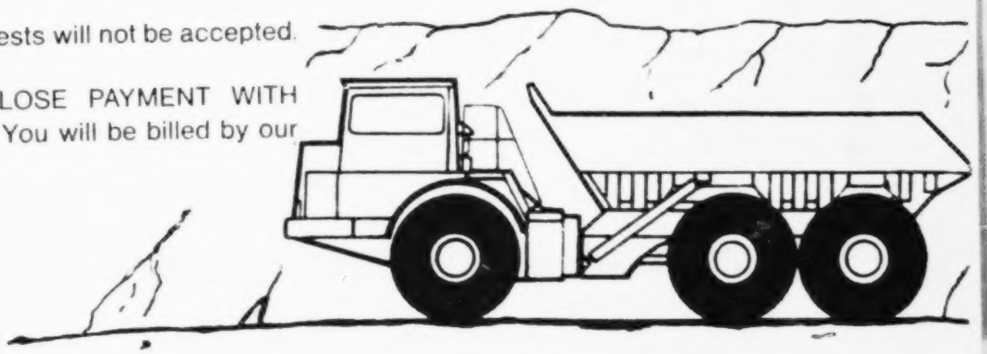
Chief, Division of Audio
Visual Services
Education and Training
Mine Safety and
Health Administration
4800 Forbes Avenue
Pittsburgh, PA 15213

Telephone requests will not be accepted.

DO NOT ENCLOSE PAYMENT WITH YOUR ORDER. You will be billed by our finance office.

The following ten modules are available as a set for $100, or individually for $10. The price includes: the slides (the number of slides in brackets), a narrated tape cassette with synchronized slide change pulses, and a supply of handout cards.

MODULE		PRICE
PIP	1. Personal Protection (87)	$ 10
PIP	2. Motor Graders (89)	10
PIP	3. Crawler-Type Dozers and Loaders (93)	10
PIP	4. Wheeled Loaders and Dozers (83)	10
PIP	5. Diesel-Electric Wheeled Loaders (83)	10
PIP	6. Diesel-Electric Haulers (93)	10
PIP	7. Diesel Off-Highway Haulers (81)	10
PIP	8. Scrapers and Trailer-Type Bottom Dump Haulers (80)	10
PIP	9. Rubber-Tired Service Tractors (79)	10
PIP	10. On/Off Road Haulers, Service and Utility Trucks (76)	10
PIP	11. Pre-Shift Inspection Program (All Ten Modules)	$100



Coal Mine Fatalities January-November 1981

U.S. Department of Labor
Mine Safety and Health Administration

Raymond J. Donovan, Secretary

Ford B. Ford
Assistant Secretary
for Mine Safety and Health

Coal Mine Fatalities in the first eleven months of 1981: 117

November Fatalities: 11

UNDERGROUND: Roof Fall 3, Haulage 2, Electrical 2, Machinery 1
SURFACE: Haulage 2, Machinery 1

(Compared with 1980: 122)

Coal Mine Fatalities for Jan.-Nov. 1981 and Jan.-Nov. 1980 by State:

	1981	1980		1981	1980
Kentucky	28	28	Missouri	2	0
West Virginia	24	31	Ohio	2	8
Colorado	20	2	Pennsylvania (Anth)	2	3
Pennsylvania (Bit)	14	13	Tennessee	2	4
Virginia	13	14	Illinois	0	11
Alabama	4	3	Indiana	0	3
Utah	3	0	New Mexico	0	1
Wyoming	3	1			

Fatalities for Jan.-Nov. 1981 by Occupation, Location and Cause:

OCCUPATION

Supervisor	18	Motorman	2
Roof Bolter/Helper	17	Drill Operator	2
Continuous Miner Operator/Helper	14	Jack Setter	2
Truck Driver	7	Timberman	2
Laborer	7	Loading Machine Operator/Helper	1
Mechanic	6	Loading Shovel Operator/Oiler	1
Shuttle Car Operator	5	Supply Man	1
Electrician/Helper	5	Bulldozer Operator	1
Scoop Operator	4	Maintenance Man	1
Belt Man/Conveyor Man	4	Stripping Shovel Operator	1
Miner Helper (Trainee)	3	Rockman	1
Superintendent	2	Pumper	1
Front End Loader Operator	2	Car Dropper	1
Brattice Man	2	Utility Man	1
Welder	2	Unknown	1

LOCATION

Underground Mine	81
Strip and Auger Mine	25
Surface Area of UG Mine	7
Preparation Plant	4

CAUSE

Roof and Rib Fall	36
Haulage	28
Electrical	11
Machinery	10
Other	32

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Fundamentals of Accident Investigation

The ESSENTIALS of a successful safety program include elimination of physical hazards, elimination of unsafe work practices, training to minimize the human factors that cause accidents, and thorough accident investigation.

Accident investigation should include inquiry into not only injury accidents, but noninjury accidents such as a broken crane hook or tank explosion that have high potential for causing serious injury. Any epidemic of minor injuries should also receive attention to determine the underlying causes.

Accident investigation is important. It is the basis for a large portion of accident prevention work, and it can mean the success or failure of a safety program.

The primary purpose of accident investigation is to pinpoint causes so that similar occurrences can be prevented, usually through one or more of the following measures:

1) mechanical improvements
2) improvement of supervision and
3) employee training.

Other purposes for investigating accidents are to: create a record for future reference; provide information for dissemination to other units; direct attention to safety in general; stimulate submission of suggestions for improvements; satisfy local, state, and federal agencies and spot areas where preventive maintenance might be needed.

There are two cardinal principles of accident investigation which anyone engaged in this work must keep in mind.

The first is that 95 per cent of accidents involve both unsafe acts and unsafe conditions. The investigator must look for all causes, both hazardous conditions and human failures, but in every case conditions should be investigated first. This holds true even for situations which it is fairly obvious that an unsafe act caused the accident.

The second is that the investigator must believe, and must convince the workers, that the purpose of accident investigation is fact-finding, not fault-finding. This is the accident investigator's most difficult and most crucial job. If workers feel that the investigator is trying to fix blame, they might withold information to protect themselves or co-workers and thereby thwart the investigation.

Accident investigators must deal with many types of personalities under strained conditions. The occasion of an accident is a trying time for all concerned and workers react to the pressure of the situation in various ways. Some become shy, nervous, apprehensive, and hesitate to talk for fear of self-incrimination. Others become hostile and resentful of what they feel is snooping. Still others, no matter how apparent their negligence, will insist that someone else or the equipment was to blame.

On the whole workers are cooperative and understanding when they are convinced that they may be helpful in preventing someone else from experiencing a similar mishap.

A good general pattern for the accident investigator to follow is:

1. Investigate all injury-producing accidents as soon after their occurence as circumstances permit. Many companies require investigation within 24 hours.

2. Delay an interview with the injured person until initial medical treatment, no matter how minor the injury. The investigator should always be more concerned with the employee's welfare than with fact-finding.

Even if the employee is willing to talk, insist upon medical attention first. If after treatment the employee is in pain or upset, postpone questioning. The injured worker is usually the main source of information about the accident, and the accuracy and completeness of the information obtained depends to a great extent upon how the interview is conducted.

3. Never use sarcasm, appear aggressive, or blame anyone. This only makes the worker withdraw or become belligerent. Some workers immediately sense and admit responsibility and become self-condemnatory. They know they are wrong and don't want or need to be reminded of it. Nothing can be gained with criticism or ridicule.

If the injured person cannot be interviewed, the investigator should talk with witnesses. At all cost, avoid making them feel that they are informers. Re-emphasize to them the purpose of the investigation --to gather the facts to prevent recurrence of the accident.

Avoid asking witness leading questions, such as, "Why was there horseplay?"--even if it's a certainty that there was. Never attempt to put words in a witness's mouth.

Re-enactment may be called for when: 1) the investigator doesn't understand, 2) the investigator isn't sure how to prevent recurrence, 3) others may benefit from it.

However, many accidents happen during re-enactment itself. Never ask someone to re-enact an obviously dangerous procedure or one that is already understood.

Re-enactment and the interviews with the injured person and witnesses are for the purpose of gathering information. Have a definite plan or outline of what information is to be obtained.

Obvious facts to gather are the injured persons name, occupation, and the date, day and hour of the accident. Not only the department but the exact scene of the accident must be known.

The same occupation may involve several different activities. Find out what particular job the employee was doing at the time of the accident.

The best guide available to follow in recording key facts about any given accident is the American National Standard Z16.2 and Method of Recording Basic Facts Relating to the Nature and Occurrence of Work Injuries. Use of this method will enable the investigator to identify key facts and record them in a form that lends itself to summarization and analysis.

Some companies leave all primary accident investigation up to the supervisor. In these companies accident investigation is considered a routine part of job responsibility, and safety personnel function as staff.

In the more serious cases, a safety engineer could verify the findings of the supervisor and investigate every important accident. In most cases, the safety-man will make a report.

Fatalities involve the highest level of investigation, frequently a plant committee and a corporate group. Insurance carriers and governmental bodies may also conduct accident investigations.

In summary, the main points to remember when investigating accidents are:

Get to the scene promptly.
Be sure the injured are treated first.
Apply empathy in interviews with witnesses and the injured.
Encourage suggestions.
Be objective--seek the facts.
Publicize the facts so all may benefit.
Follow up.

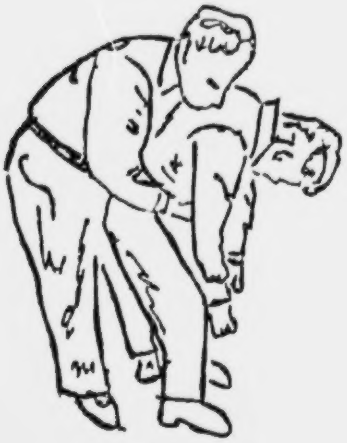
HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

First Aid For Chokers

This emergency may arise in a restaurant or at home while dining. The victim having a piece of food lodged in his windpipe suddenly cannot talk, breath, and may lose consciousness!

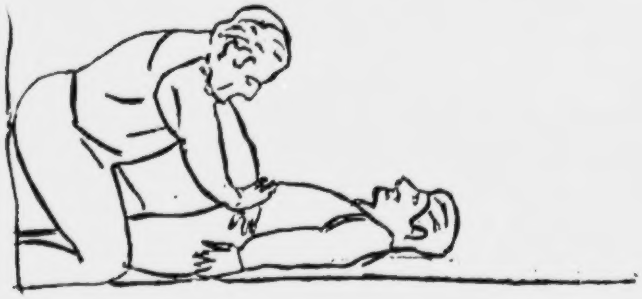
The Heimlich Maneuver has been developed to dislodge the blockage.

This is how the maneuver is done:



Standing Position

1. Stand behind the victim and wrap your arms around the waist.
2. Allow the victim's head, arms and upper torso to hang forward.
3. Make a fist with one hand and grab it with the other. Place the fist against the victim's abdomen, slightly above the navel and below the rib cage.
4. Press your fist into the victim's abdomen with a forceful upward thrust. Repeat if necessary.



Prone Position

1. Place the victim on his back.
2. Kneel astride the victims hips with one hand on top of the other.
3. Place the heel of the bottom hand on the abdomen, slightly above the navel and below the rib cage.
4. Press into the victim's abdomen with a forceful upward thrust. Repeat if necessary.

REMEMBER TO GET BELOW THE RIB CAGE AND MAKE THE MANEUVER QUICK AND FORCEFUL!

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
Subchapter N--Metal and Nonmetallic
Open-Pit Mines
Part 55.11--Travelways

We shall be discussing the Federal Standards governing travelways in open pit metal and non-metal mines which are subject to the Metal and Nonmetallic Mining Act. Each standard is mandatory, and therefore requires, that the mine operator meets the requirements of each; failure to comply will result in a citation for each non-compliance, as required by section 8 of the Act. It should also be noted that the purpose of these standards is for health and safety, and the prevention of accidents in each mine.

55.11-1 Safe means of access shall be provided and maintained to all working places.

55.11-2 Crossovers, elevated walkways, elevated ramps, and stairways shall be of substantial construction, provided with handrails, and maintained in good condition.

55.11-3 Ladders shall be of substantial construction and maintained in good condition.

55.11-4 Portable rigid ladders shall be provided with suitable bases and placed securely when used.

55.11-5 Fixed ladders shall be anchored securely and installed to provide at least 3 inches of toe clearance.

55.11-6 Fixed ladders shall project at least 3 feet above landings, or substantial handholds shall be provided above the landings.

55.11-7 Wooden components of ladders shall not be painted except with a transparent finish.

55.11-8 (RESERVED)

55.11-9 Walkways with outboard railings shall be provided wherever persons are required to walk alongside elevated conveyor belts. Inclined railed walkways shall be nonskid or provided with cleats.

55.11-10 Vertical clearance above stair steps shall be minimum of seven (7) feet, or suitable warning signs or similar devices shall be provided to indicate an impaired clearance.

55.11-11 Persons using ladders shall face the ladders and have both hands free for climbing and descending.

55.11-12 Openings above, below, or near travelways through which persons or materials may fall shall be protected by railings, barriers, or covers. Where it is impractical to install such protective devices, adequate warning signals shall be installed.

55.11-13 Crossovers shall be provided where it is necessary to cross conveyors.

55.11-14 Moving conveyors shall be crossed only at designated crossover points.

55.11-15 (RESERVED)

55.11-16 Regularly used walkways and travelways shall be sanded, salted, or cleared of snow and ice as soon as practicable.

55.11-17 Fixed ladders shall not incline backwards.

55.11-18 through 55.11-24 (RESERVED)

55.11-25 Fixed ladders, except on mobile equipment, shall be offset and have substantial railed landings at least every 30 feet unless backguards or equivalent protection, such as safety belts and safety lines, are provided.

55.11-26 Fixed ladders 70 degrees to 90 degrees from the horizontal and 30 feet or more in length shall have backguards, cages or equivalent protection, starting at a point not more than seven (7) feet from the bottom of the ladders.

55.11-27 Scaffolds and working platforms shall be of substantial construction and provided with handrails and maintained in good condition. Floor boards shall be laid properly and the scaffolds and working platforms shall not be overloaded. Working platforms shall be provided with toeboards when necessary.

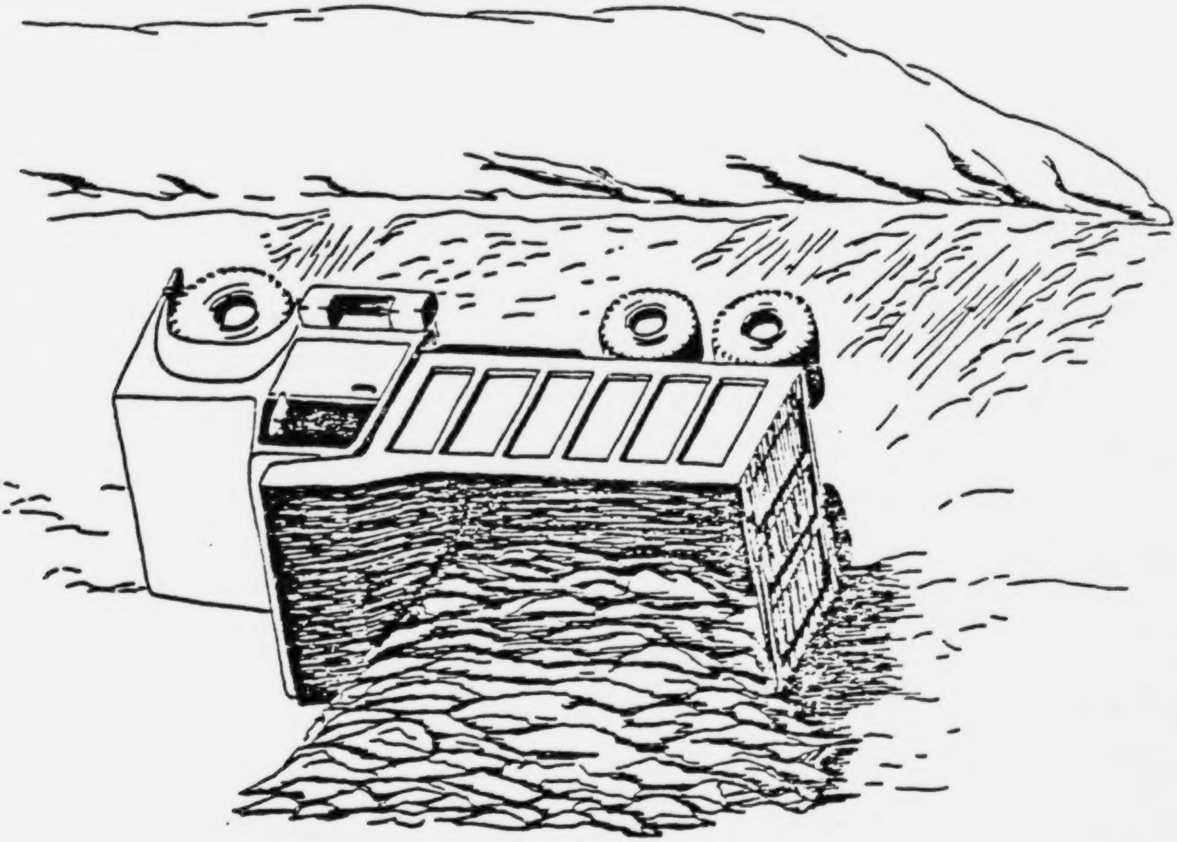
HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 77--Surface Coal Mines and
Surface Work Areas of Underground Coal Mines
Subpart Q--Loading and Hauling

Sections 77.1605 - 77.1606

In today's session we will continue discussing the safety standards as they pertain to loading and haulage. First, however, let's look briefly at a surface haulage fatality.

An evening shift dump truck operator backed his truck up the dump ramp on a topsoil stock pile to place his load of dirt. When the truck reached the top of the stock pile, it approached the outer edge of the ramp and began to sink into soft material. The edge of the elevated ramp gave way allowing the truck to overturn. The dump truck operator was thrown beneath the truck where he received fatal crushing injuries.



Compliance with some of the following standards may have prevented this accident.

Section 77.1605--Loading and haulage equipment; installations.

(A) Cab windows shall be of safety glass or equivalent, in good condition, and shall be kept clean. Cracks or discolorations in the cab windows can be tolerated provided that the vision of the operator is not impaired or distorted or in the case of windshields, the crack is located where it will not damage the windshield wiper blades. Plexiglass may be used in lieu of safety glass in cab windows if the transparency is not impaired by scratches or discoloration.

(B) Mobile equipment shall be equipped with adequate brakes, and all trucks and front-end loaders shall also be equipped with parking brakes.

(C) Positive-action type brakes shall be provided on aerial tramways.

(D) Mobile equipment shall be provided with audible warning devices. Lights shall be provided on both ends when required.

(E) Guard nets or other suitable protection shall be provided where tramways pass over roadways, walkways, or buildings.

(F) Guards shall be installed to prevent swaying buckets from hitting towers.

(G) Aerial tramway cable connections shall be designed to offer minimum obstruction to the passage of wheels.

(H) Rocker-bottom or bottom dump cars shall be equipped with positive locking devices, or other suitable devices.

(I) Ramps and dumps shall be of solid constructions, of ample width, have ample clearance and headroom, and be kept reasonably free of spillage.

(J) Chute-loading installations shall be designed so that the men pulling chutes are not required to be in a hazardous position during loading operations.

(K) Berms or guards shall be provided on the outer bank of elevated roadways.

"Berm" as used in this requirement means a pile or mound of material at least axle high to the largest piece of equipment using such roadway, and as wide at the base as the normal angle of repose provides. Where guardrails are used in lieu of berms, they shall be of substantial contruction.

The width of the haulage road does not preclude the need for berms or guardrails. The requirements of Section 77.1605(K) apply to that part of an elevated haulage road where one bank is, or both banks are, unprotected by a natural barrier which will prevent vehicles or equipment from running off and rolling down the unprotected bank or banks.

"Elevated roadways", as used in this requirement, are roadways of sufficient height above the adjacent terrain to create a hazard in the event mobile equipment ran off the roadway.

(L) Berms, bumper blocks, safety hooks, or similar means shall be provided to prevent overtravel and overturning at dumping locations.

(M) Roadbeds, rails, joints, switches, frogs, and other elements on railroads shall be designed, installed, and maintained in a safe manner consistent with the speed and type of haulage.

(N) Where practicable, a minimum of 30 inches continuous clearance from the farthest projection of moving railroad equipment shall be provided on at least one side of the tracks; all places where it is not possible to provide 30-inch clearance shall be marked conspicuously.

(O) Track guardrails, lead rails, and frogs shall be protected or blocked so as to prevent a person's foot from becoming wedged.

(P) Positive-acting stop-blocks, derail devices, track skates, or other adequate means shall be installed wherever necessary to protect persons from runaway or moving railroad equipment.

(Q) Switch throws shall be installed so as to provide adequate clearance for switchmen.

(R) Where necessary, bumper blocks or the equivalent shall be provided at all track dead ends.

Section 77.1606--Loading and haulage equipment; inspection and maintenance.

(A) Mobile loading and haulage equipment shall be inspected by a competent person before such equipment is placed in operation. Equipment defects affecting safety shall be recorded and reported to the mine operator.

(B) Carriers on aerial tramways, including loading and unloading mechanisms, shall be inspected each shift; brakes shall be inspected daily; ropes and supports shall be inspected as recommended by the manufacturer or as physical conditions warrant. Equipment defects affecting safety shall be reported to the mine operator.

(C) Equipment defects affecting safety shall be corrected before the equipment is used.

Mobile loading and haulage equipment shall be inspected by a competent person before such equipment is placed in operation at the beginning of each shift. Any defects found affecting safety during the required inspection shall be recorded and reported to the mine operator.

Lost Tempers Cause Accidents

Mr. Average Man can lose his temper several times a week.

And each time he does, the National Safety Council notes, the chances of an anger-caused accident are increased.

No one knows how many accidents are caused by anger, because a person seething with rage can hide it well and the casual observer is unaware that anything is wrong.

Recent studies at Columbia University and Oregon State College showed that the man who loses his temper several times a week usually gets mad at inanimate objects. Women, according to the study, usually become mad at other persons.

People get angry most often just before breakfast, lunch, and dinner. Both men and women are most irritable on an empty stomach.

Doctors and lawyers lose their tempers least often; executives and skilled workers are next; office workers and laborers most frequently of all, according to an American Medical Association survey.

Only 15 per cent felt better after losing their tempers, and two-thirds were left feeling irritable and fatigued, according to the studies.

At the University of Pennsylvania, pictures of extremely angry people were shown to hundreds of college students. Only 2 per cent were able to identify the emotion as anger.

So, the next time you're trying to impress someone by showing how mad you can get, stop first and think about what you might look like to them.

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

How Many Horses Do You Use

Ever stop to think about how many of our expressions use the word "Horse" in them? Did you ever say --

big as a horse?
works like a horse?
eats like a horse?
don't look a gift horse in the mouth?
he was on his high horse?
that's a horse of a different color?
aw, horse radish?
he was just horsing around?
his lucky horse show?
the size of a horse chestnut?
tough as horse hide?
big as a horse fly?
stiff as horse hair?
gave him the old horse laugh?
watched an old horse opera on the TV?
cowboy's horse pistol?

Yes--the poor old horse gets the blame for a lot of things, but why do we insult him by calling poor judgment "Horse play"? Nobody ever saw a horse pull a chair from under someone, or throw a lighted firecracker near someone, or turn a compressed air hose on somebody. The poor old horse was never guilty of lots of things commonly called horse play.

Perhaps the one thing we need most is one more "Horse". Good old fashioned "horse sense".

They say that horse sense is the result of stable thinking. Let's all do a little more stable thinking, use more horse sense and have less horse play. O.K.?

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

"He Used To Be . . ."

He used to be a real "hurry-wart." First one off the mancar--first out of the mine. First one out of the plant. First one through the intersection . . . but there's no rush now. He's got lots of time--an eternity of time.

He used to be a great grumbler. Griped about all the stupid people he worked for. Griped at safety meetings about all the "dull guff" he had to listen to . . . but there's no grumbling now. He's quiet, real quiet.

He used to be the super-agressive type. Bulled his way through. Pulled disconnects and cut wires without bothering to look or think . . . but there's no blind motion now. No motion at all.

He used to be full of the nervous fidgets. Jittered all over the job site and in the plant, jittered all through the day . . but there's no jittering now. He's calm, real calm, and still.

He used to be the absent-minded kind. Forgot to signal. Forgot to look over the job. Forgot to check his tools and ropes . . . but there's no forgetting now. No remembering, either.

He used to be the chip-on-the-shoulder type. Had all the answers. No supervisor or crew leader could tell him what to do. He'd do it his way . . . but there's no back-talk now. No talk at all.

He used to be the real dare-devil. Loved to risk his neck. Loved to take the dangerous shortcut. Got a real kick out of taking chances . . . but there's no chance-taking now. No taking anything, not even a breath.

"He used to be . . ." A sad story that will be written again and again and again. As long as we don't eliminate our serious faults, there's no exaggeration about that now. It's right. It's dead right.

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

FATALITIES RELATED TO SAFETY BELTS, SAFETY LINES, OR LANYARDS, 1978-1979

Introduction

Fatal Accident Investigation Reports concerning accidents which could have been prevented or mitigated by the use of safety belts, safety line and lanyards occurring in 1978 and 1979 have been summarized and analyzed in this report. This study shows a need for the enforcement of the use of safety belts, safety lines, or lanyards. Drawings, technical data, and a discussion of various types of safety equipment that can be used to assist mine operators in the safe and proper use of safety belts, safety lines, or lanyards are included.

Analysis

According to accident/injury data on file at HSAC for the years 1978 and 1979, there were 33 fatalities in the mining industry directly related to improper use or failure to wear safety belts or safety lines and one fatality resulting from the failure or breakage of the safety equipment (lanyard). The majority of the fatalities, twenty-six, occurred in metal/nonmetal mining, the remaining eight in coal mining.

Accident investigations show that eleven of the metal/nonmetal fatalities occurred as a result of management's failure to provide safety belts, safety lines, or lanyards. Failure of the miner to wear safety equipment provided by the mining company accounted for twelve of the fatalities. The remaining three accidents resulted from safety equipment being improperly worn.

In coal mining, analysis of the eight fatal accident investigations show that four accidents occurred because the miner failed to wear provided safety equipment. Three of the eight fatals occurred due to management's failure to provide the necessary safety equipment. The remaining fatal injury was a direct result of a safety lanyard failure.

Table 1.--Fatalities related to safety belts, safety lines, or lanyards (1978-1979)

	M/NM			Coal				
	1978	1979	Subtotal	1978	1979	Subtotal	Combined total	Total %
Failure to wear provided safety belts or lines	7	5	12	3	1	4	16	47
Failure of mining company to provide safety belts or lines	8	3	11	0	3	3	14	41
Failure to wear safety belts or lines in a proper manner	2	1	3	0	0	0	3	9
Failure of provided safety lanyard	0	0	0	1	0	1	1	3
TOTALS	17	9	26	4	4	8	34	100

In four metal/nonmetal accident investigations and two coal accident investigations it was found that the victim was standing on material that was being drawn from below without wearing safety equipment.

Sixteen (47 percent) of the accidents during this period occurred as a result of failure of the victim to wear company provided safety equipment. This indicates inadequate indoctrination or training of employees in recognizing hazardous situations and locations where wearing of the provided safety equipment is necessary.

Table 2.--Failure to wear safety belts under hazardous working conditions

	1978		1979		Combined total
	M/NM	Coal	M/NM	Coal	
Working at elevations	2	2	1	1	6
Working at open chute or raise	2	0	0	0	2
Entering storage bins	2	0	2	0	4
Standing on loose material above feeder	0	1	1	0	2
Working from a raised truck bed dumping into feeder	1	0	0	0	1
Working above crusher	0	0	1	0	1
TOTALS	7	3	5	1	16

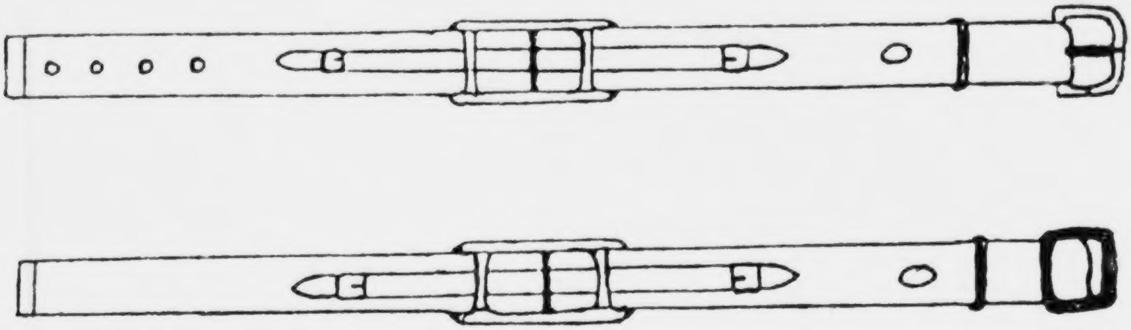
A training program demonstrating proper selection and use of safety belts, safety lines, or lanyards should be established. The importance of close job supervision regarding the use of safety equipment under hazardous conditions must be stressed by the coal and metal/nonmetal mining industries.

Acceptable safety gear worn in a correct manner at the appropriate time can and will save lives. The following information has been assembled to illustrate various types of safety belts, lanyards and their correct use.

DISCUSSION OF SAFETY BELTS, HARNESSES, BUCKLES, SNAPHOOKS, AND LANYARDS

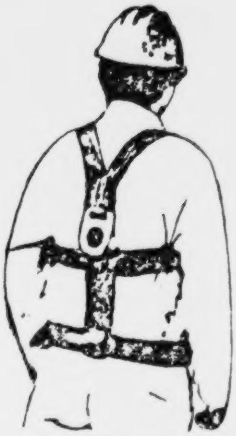
Safety belts are made by numerous manufacturers. An acceptable criteria for safety equipment is ANSI A 10.14 requirements (American National Standard Requirements for Construction and Industrial Safety Belts, Harnesses, Lanyards, Lifelines, and Drop Lines), this standard being the guide used for compiling the following discussion.

Types of Belts and Uses



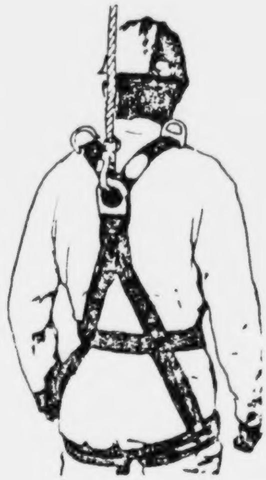
Body Belts
Figure 1.

Body belts or waist belts (figure 1) are a simple or compound strap with a means of securing it about the waist. One or two "D" rings are generally incorporated in the belt for securing a lanyard. A single "D" ring attached to a lanyard should be located in the center of the back. Strength members of safety belts may be made of any material except leather. Body or waist belts (workbelts) are generally used to restrain a person and to reduce the probability of falling.



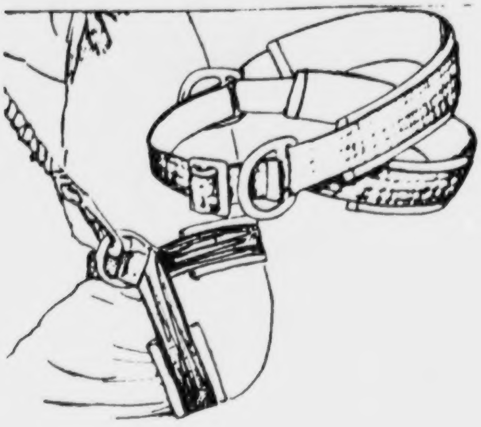
Chest Harness
Figure 2.

A chest-waist harness (figure 2) consists of a chest belt, a waist belt, and attaching shoulder straps that insure proper chest strap positioning and has provisions for attaching a lanyard ("D" ring) located in the back between the shoulder blades. Chest-waist harnesses are designed to spread fall forces over the chest and waist, dividing the impact force. Chest-waist harnesses are used where there are limited fall hazards (no vertical free fall hazard) and for retrieval (removing a person from a bin or tank).



Body or Parachute Harness
Figure 3.

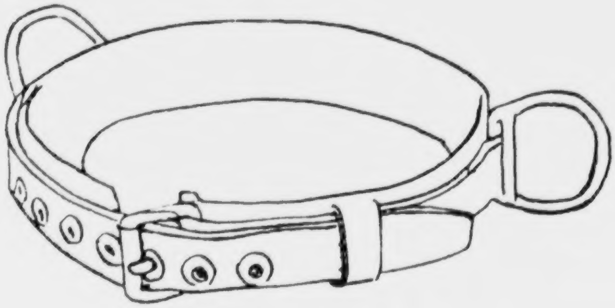
Body or parachute harness (figure 3) features a waist belt, two leg belts, and a harness from each leg strap over the shoulders and back to the leg strap. The harness webbing is double constructed to allow the waist belt to be inserted through pockets sewn in the harness. Three "D" rings are usually mounted on the harness, one between the shoulder blades and one near the top of each shoulder for lifeline attachments in different situations. This harness is used to arrest the most serious free falls. The body harness distributes fall forces over the chest, waist, and legs. The belt is ideally used in hoisting and lowering a man, and will withstand maximum pull.



Multi-Purpose or Suspension Belts
Figure 4.

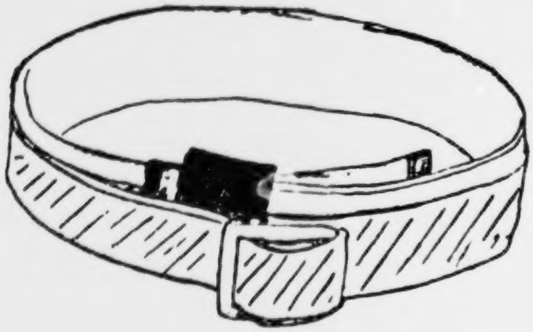
Multi-purpose or suspension belts (figure 4) have greater versatility in that they can be used as a waist belt, a positioning belt, and a lowering or lifting belt. They are generally used as a work support to suspend or support the worker.

Buckles for Belts



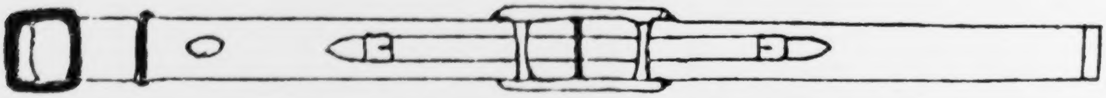
Tongue Buckle Type
Figure 5.

Safety belts are supplied with a variety of buckles. Tongue buckles with drop-forged steel frames depend upon a tongue passed through grommet re-enforced holes in the webbing or other strength member of the belt to maintain its position. When grommets are inserted through a web belt, the fibers should be separated or spread, and the grommet inserted between the fibers. Cutting fibers during grommet installation weakens the belt and could cause belt failure.

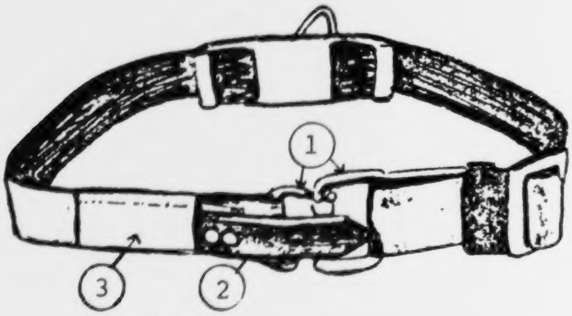


Friction Buckle
Figure 6.

Friction buckles (figure 6) can be either drop-forged or stamped steel. The single pass fixed bar type (figure 7) maintains its position on the webbing by means of a single pass of the webbing over the fixed center bars. The single pass, sliding bar type maintains its position on the webbing by means of a single looping of the webbing over the sliding center bar. The double pass friction type maintains its position on the webbing by friction and requires a double pass of the webbing over the center bar.



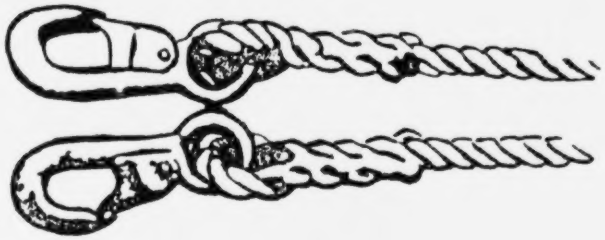
Single Pass Type
Figure 7.



Quick Release Buckle
Figure 8.

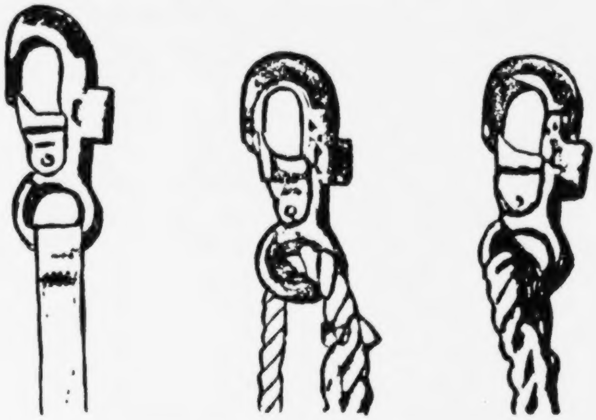
The quick release buckle (figure 8) consists of three parts: (1) an engaging frame, (2) a locking lever with a keeper tongue assembly, and (3) a keeper tunnel. This multiple component buckle can be released with one positive action, while the releasing action remains positively locked in normal use.

Snaphooks



Single Lock Snaphooks
Figure 9.

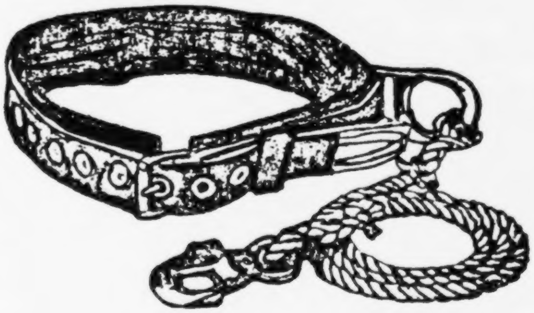
"D" rings and snaphooks used to secure a lanyard to the safety belt are drop-forged steel. Circle designed "D" rings are proportioned to minimize the possibility of accidental disengagement of a snaphook by depression of the snaphook keeper latch. Snaphook proportions are also made to minimize accidental disengagement. The snap nose restrains the keeper to absorb side loads. Single-lock snap hooks (figure 9) are not "roll-out" proof under all conditions.



Double Lock Snaphooks
Figure 10.

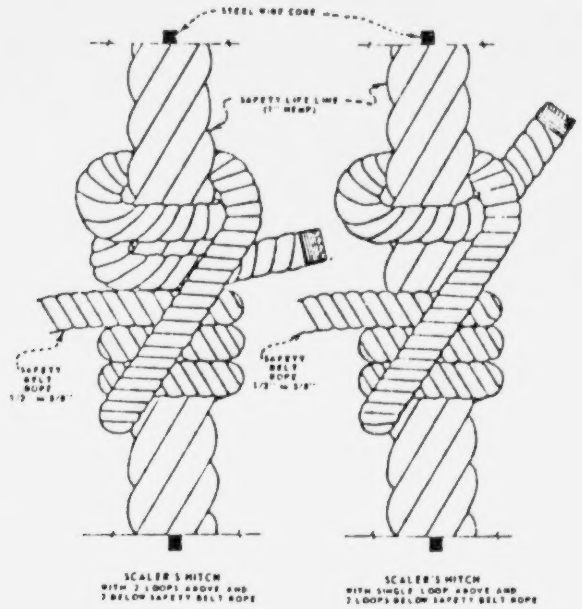
Double-lock snaphooks (figure 10) provide maximum safety. Double-lock snaps should always be used if the mating ring is less than 2-1/2 inches inside diameter. Mated "D" ring and snaplocks should be used to prevent the ring from bringing pressure on the keeper with resulting release or roll out.

Lanyards



Belt and Lanyard
Figure 11.

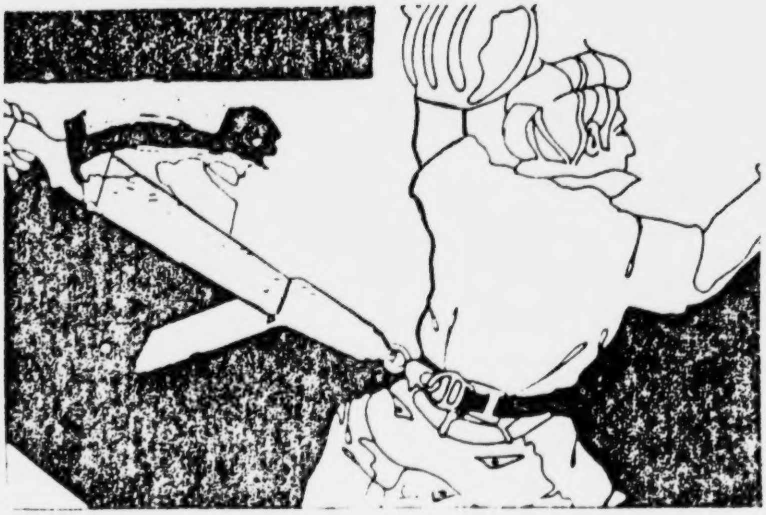
Rope lanyards (figure 11) can be spliced directly to the belt through an integral rope loop, spliced to a "D" ring, or a snaphook for attaching to the "D" ring. Splices to hardware should be made over suitable thimbles. Lanyards should be anchored to limit a possible fall to no more than six feet, the distance used in design and testing of safety belts. Lanyards should be attached to an anchor point above the worker. Users should not climb above the anchor point. Lanyard should fasten to the back of the belt. Wire lanyard should not be used where impact loads are anticipated or where electrical hazards exist.


STEEL WIRE CORE
SAFETY LIFE LINE (1" HEMP)
SAFETY BELT ROPE 1/2" — 5/8"
SAFETY BELT ROPE 1/2" — 5/8"
SCALER'S HITCH WITH 2 LOOPS ABOVE AND 3 BELOW SAFETY BELT ROPE
SCALER'S HITCH WITH SINGLE LOOP ABOVE AND 3 LOOPS BELOW SAFETY BELT ROPE

Scalers Hitch (Pigtail)
Figure 12.

Whipped end taglines or lanyards are sometimes secured to lifelines using a scalers hitch (figure 12). Grasping the hitch in the hand allows it to slide along the lifeline, when the knot is released it automatically clinches around the lifeline. This arrangement provides freedom of movement to the workman without an overly long safety rope.

Belts and lanyard assemblies should be visually inspected for defects prior to each use. Additional attention is required for belts and lanyard assemblies used around welding or cutting which may cause weakening from burns.



Shock Absorber
Figure 13.

All safety equipment covered in this discussion can also be equipped with shock absorbing elements to cushion the impact and reduce injury from free fall stopping forces (figure 15).

TESTING OF SAFETY BELTS, HARNESSES, BUCKLES, LANYARD, SNAPHOOK AND "D" RINGS

Some ANSI A 10.14 test criteria for safety belts, harnesses, and appurtenances are:

Samples of each type of belts, harnesses, and lanyards as units shall withstand without failure a test consisting of three successive drops of a 250 pound (113 Kg) rigid weight falling free through a distance of six feet (1.8 M).

Body belts (class 1) with their associated lanyards when subject to a fall shall produce a stopping force of not more than ten times gravity.

Chest harnesses (class 11) and suspension belts (class IV) shall not be used for stopping falls and are not subject to impact requirements.

Body harness (class 111) and its associated lanyards when subject to a fall shall produce a stopping force of not more than 35 times gravity.

Tongue buckle frame shall be capable of withstanding a tensile test of four thousand (4000) pounds (1815 Kg) without failure.

Friction buckles shall withstand a tensile strength test of four thousand (4000) pounds (1815 Kg) without failure.

Quick release buckles shall withstand a tensile strength test of four thousand (4000) pounds (1815 Kg) without failure.

"D" rings and snaphooks shall withstand a five thousand (5000) pound (2300 Kg) tensile test without failure.

Fixed anchorages must be capable of supporting a minimum dead weight of 5400 pounds (2450 Kg) per worker.

Lifelines must be capable of supporting a minimum dead weight of 5400 pounds (2450 Kg) per person applied at the center of the life line.

Belts, harnesses and lanyards which have been subjected to drop tests shall not be used except for display or education.

January 10, 1978

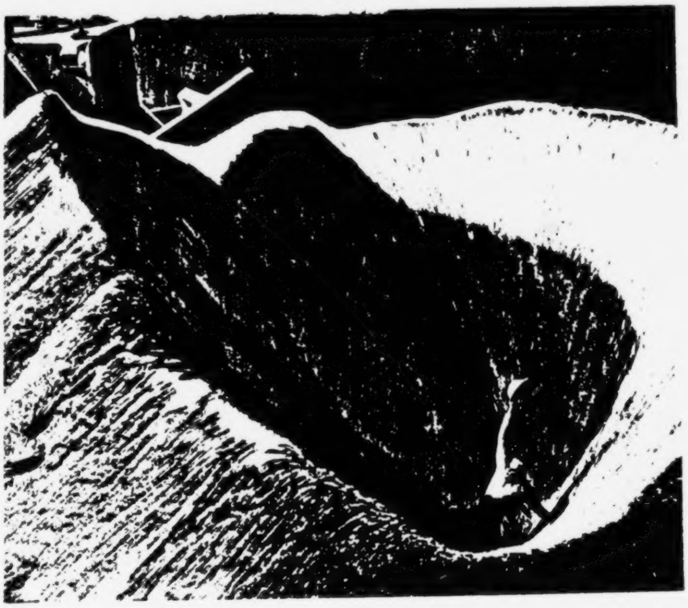
An ironworker apprentice, age 34, was fatally injured when he fell approximately 66 feet following breakage/failure of his lanyard. He had 2 1/2 years experience as an ironworker trainee, the last 3 1/2 months of which were at this mine.

Cause of accident: This accident occurred when management failed to recognize a hazardous condition in that ironworkers were allowed to use lanyards as a primary means of support and were not using safety lines. A contributing factor was the use of lanyards constructed of combustible material in an area where cutting torches were being used and the lanyards were subjected to heated surfaces.

January 28, 1978

A conveyor operator, age 36, died as a result of suffocation when he slipped and fell into a surge pile draw hole. His total mining experience was 18 months, all at this mine.

Cause of accident: Failure of management to provide safety belts and lines and have a second person attend the line while work was being performed where a fall could occur and failure to provide a safe access and work platform at the conveyor for checking plug-ups and hang-ups. A contributing factor was the victim placing himself in an unsafe position on the surge pile next to an open draw hole while material was being drawn out from below.



February 4, 1978

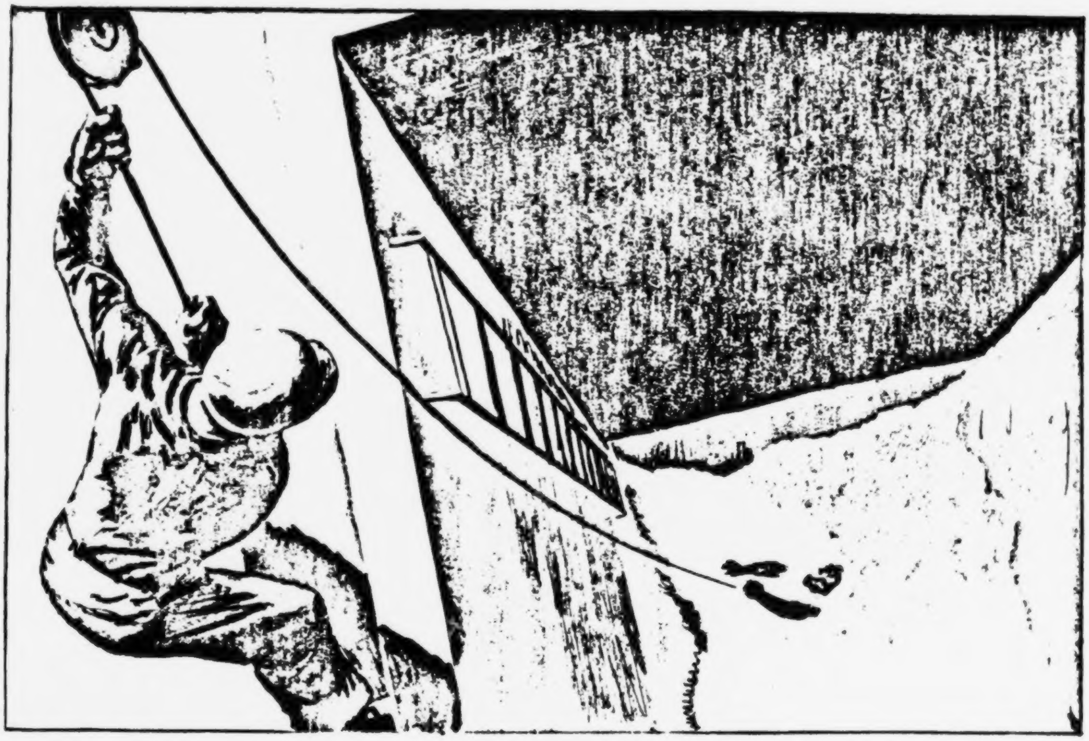
A drillers helper, age 18, was fatally injured when he tripped on the edge of a concrete pad around the collar of a 60-inch diameter drill hole and fell approximately 650 feet into the open hole. He had 4 months job experience.

Cause of accident: Management's failure to enforce the use of safety belts and lines while working in an area where the danger of falling exists, and failure to cover or guard drill holes immediately after drilling is complete.

February 13, 1978

A laborer, age 35, was fatally injured when he was trapped by several tons of dust which slid into the hopper in which he and another man were working. He had a total of 14 years mining experience, all with this company; the last 5 years as a laborer.

Cause of accident: Failure of management to provide safety belts and lines with a second person attending the line while work is being done in dangerous areas. Also, management's failure to establish and enforce safe procedures for cleaning hoppers.



February 15, 1978

A front-end loader operator, age 48, died as a result of suffocation when he was engulfed by sand and gravel as he attempted to free a hang-up in a hopper. His known mining experience was 3 1/2 years, all at this mine.

Cause of accident: Failure of management to provide a safety belt and line with a second person attending the line while work is performed in hoppers, and failure to enforce company safety rules and regulations by allowing employees to enter hoppers on top of bridged material.

April 17, 1978

An oiler, age 55, suffered fatal injuries when he fell approximately 105 feet while performing maintenance work along an elevated walkway located along the boom of a dragline. He had 35 years of mining experience including 12 years as an oiler.

Cause of accident: The direct cause of the accident could not be determined during the investigation. Failure to provide and enforce the use of safety belts or equivalent safety devices for persons who work in an elevated area where there is a danger of falling contributed to the severity of the accident.

April 26, 1978

An ironworker (connector), age 21, died from injuries received when he fell or jumped approximately 56 feet from a freestanding column. He had 2 years and 3 months experience as an ironworker, 3 months on this job.

Cause of accident: Management's failure to strictly enforce safety rules and regulations requiring all employees to properly use provided safety belts and tag lines while working in situations where movement was not required. Failure in the design of the anchor bolts was a contributing factor.

May 23, 1978

An ironworker, age 27, was fatally injured when he fell approximately 35 feet while attempting to unhook a chocker cable from a belt conveyor gallery tube. He had 5 years experience as an ironworker.

Cause of accident: Failure of management to provide a safe means of access and a safe work area on top of the belt conveyor gallery tube. Contributing factor was supervision's failure to enforce the use of safety belts and lines when working where a danger of falling exists.

May 23, 1978

A mill operator helper, age 42, died as a result of suffocation when he was buried under minus 1-inch crushed limestone. He fell into a feeder bin while attempting to unplug an 11-inch feeder pipe supplying the bin. He had 9 years mining experience and 1 1/2 years at this job classification.

Cause of accident: The direct cause of the accident was failure of management to provide a safe means of access to the 11-inch feeder pipe for clean-out purposes. Failure to wear the provided safety line and the fact that the victim was working alone for several minutes were factors which contributed to the severity of this accident.

July 5, 1978

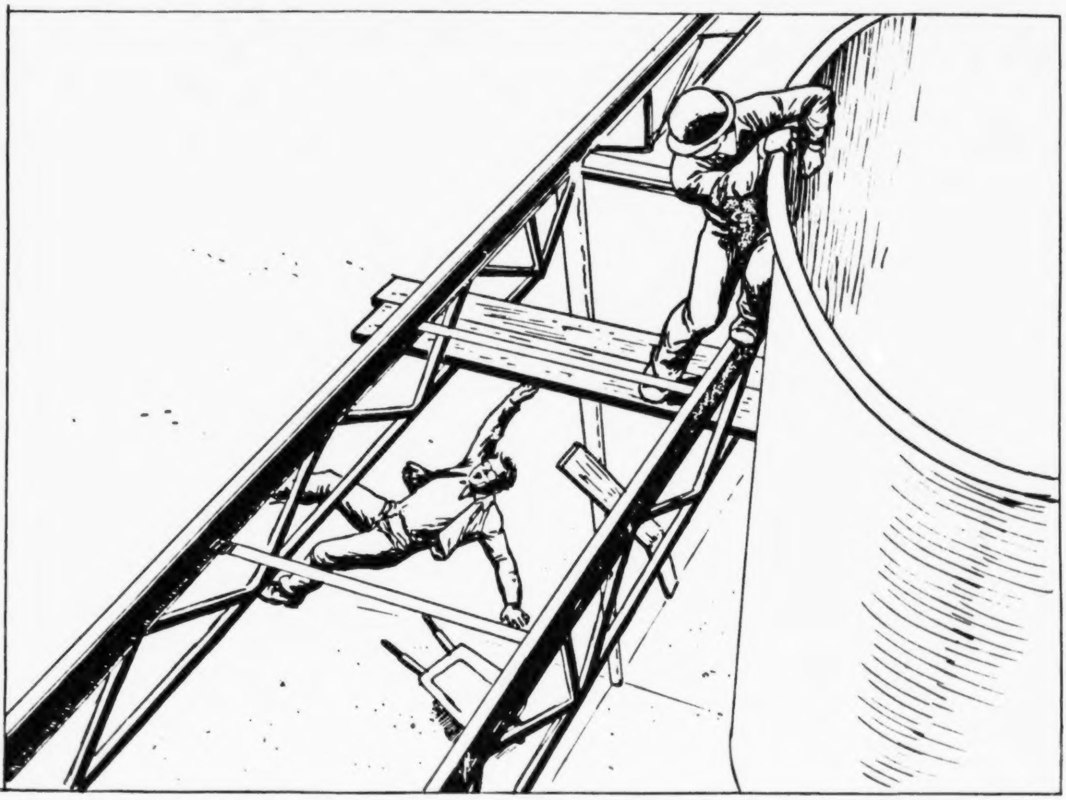
A maintenance foreman, age 37, died as a result of asphyxiation when he was trapped by several tons of sand which slid from the side of the bin-silo in which he was working. His total mining experience was 18 years, the last 6 years in this job classification.

Cause of accident: The primary cause of the accident was the failure of management to provide a safe means of access for employees whose duties require them to enter bin-silos. Collateral to the primary cause was the victim placing himself in an unsafe position by attempting to "trim down" material which was located above him. Contributing to the severity of this accident was the improper tie-off of the safety line.

July 7, 1978

A master electrician, age 60, was fatally injured when he fell approximately 65 feet from an elevated work platform while performing maintenance work. He had 34 years mining experience, 5 years and 2 months as an electrician.

Cause of accident: The direct cause of this accident was failure of management to provide the work platform with adequate handrails to prevent a person from falling. A contributing factor was the victim working at an elevated area where there was a danger of falling without utilizing a safety belt.



July 21, 1978

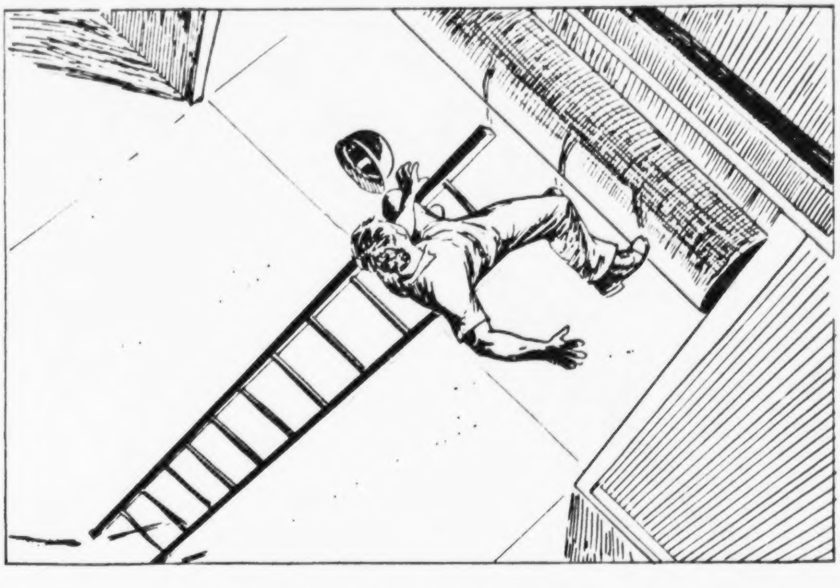
A miner, age 48, was fatally injured when the roof of a building on which he was standing broke and he fell approximately 26 feet to the floor below. His known mining experience was 2 years, all at this facility.

Cause of accident: The direct cause of this accident was supervision allowing employees to stand on unsuitable material (manufacturer specifically cautioned against standing on roofing). Failure to require the use of safety belts and lines was a contributing factor.

August 12, 1978

A repairman, age 37, died as a result of skull injuries received when he fell approximately 15 feet from an overhead door while repairing a slurry line. His total known mining experience was 4 years, 6 months at this job.

Cause of accident: The direct cause of the accident was the failure of management to enforce the use of proper equipment for performing work in an elevated location. (There was a scaffold platform in the area and safety belt and line in the victim's locker that were not used.)



September 19, 1978

A front-end loader operator, age 55, was fatally injured when the bridge of material he was standing on collapsed and buried him under approximately 6 feet of fine stone. He had 32 years total mining experience, the last 23 weeks at this job classification.

Cause of accident: The cause of the accident was the victim placing himself in a hazardous position by walking on a pile of stone he knew was being drawn from the bottom. A contributing factor was failure of the victim to obtain the necessary safety equipment, i.e., safety belt and line, and failure to have a second person attend the lifeline.

September 27, 1978

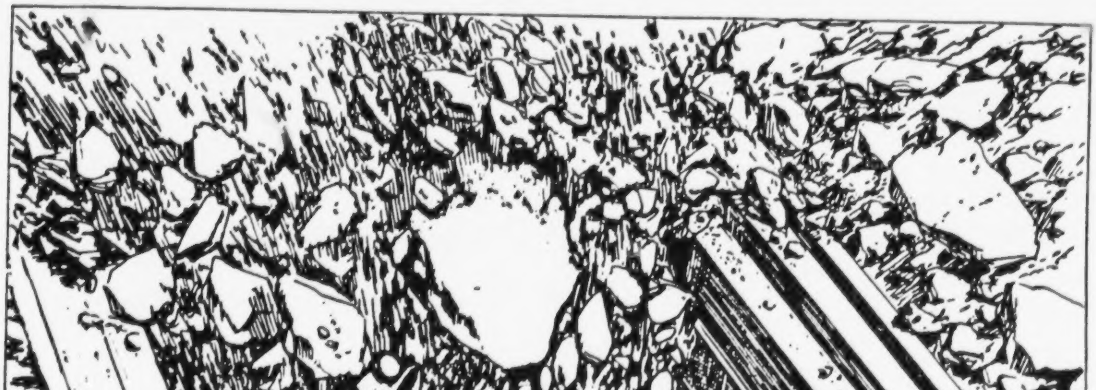
A shift laborer, age 24, was suffocated when crushed rock engulfed him. He had entered the raw limestone feed bin to retrieve a wooden ladder. His total mining experience was 2 months, 2 days at this job.

Cause of accident: The primary cause of this accident was management's failure to establish a safe work procedure for entering bins. A secondary cause was failure of the victim to recognize a hazardous condition by working under hanging material and by using an excessively long safety line.

October 14, 1978

A contract miner, age 21, was injured when he slipped or fell into an ore-chute while making preparations for slushing. He died on 10/25/78. His total mining experience was 3 years and 8 months, all at this mine.

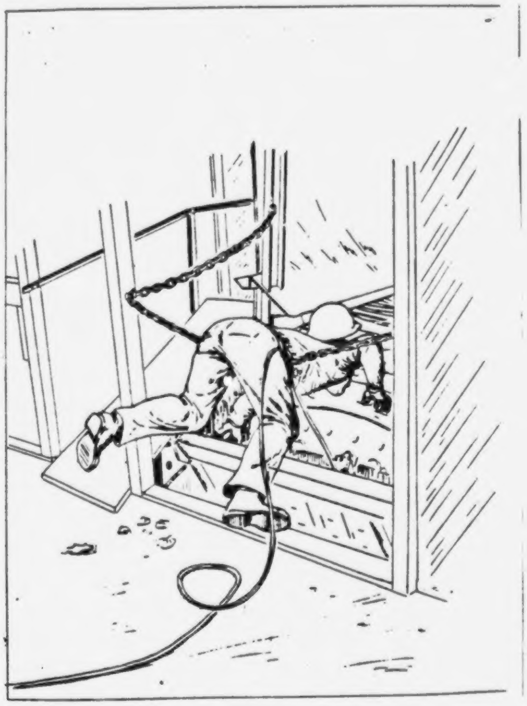
Cause of accident: The direct cause of the accident was the failure of management to properly enforce use of safety lines and belts and other safe means of working around an open ore-chute.



November 8, 1978

A primary crusher operator, age 17, was killed instantly when he fell from a pan feeder into a jaw crusher while trying to dislodge a large rock that was hung up in the crusher jaws. His total mining experience was 11 weeks, one week at this job classification.

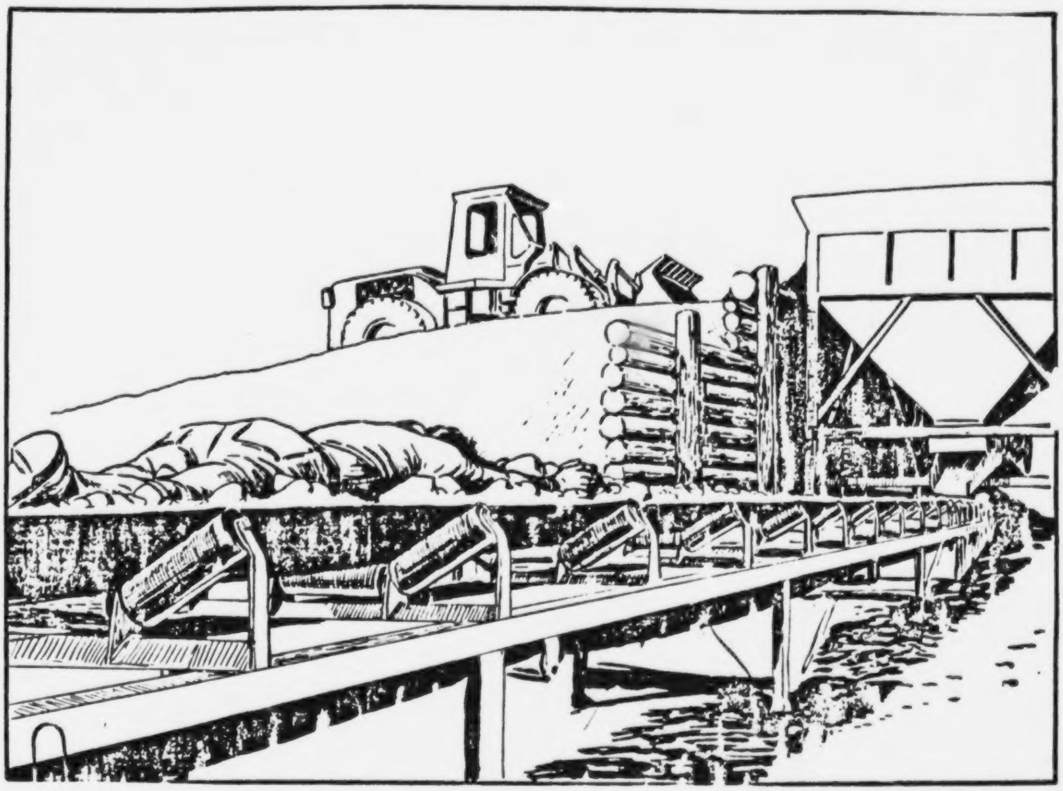
Cause of accident: The direct cause of the accident was the victim working at the mouth of the crusher while the crusher was in motion in disregard of established safe work procedures for removing large chunks from the crusher. Contributing to the severity of the accident was the fact that a safety belt and line was not provided.



December 2, 1978

A truckdriver, age 24, was buried and suffocated when the material he was standing on gave way, forcing him into a feeder bin. He was then gravity-fed through the feeder bin and onto the feeder belt and to the crusher. His known mining experience was 2 years and 4 months, all as a truckdriver.

Cause of accident: This accident was a direct result of supervision's failure to enforce established safety rules pertaining to the cleaning of dump truck beds. A safety belt and lines was not provided which contributed to the severity of the accident.



December 4, 1978

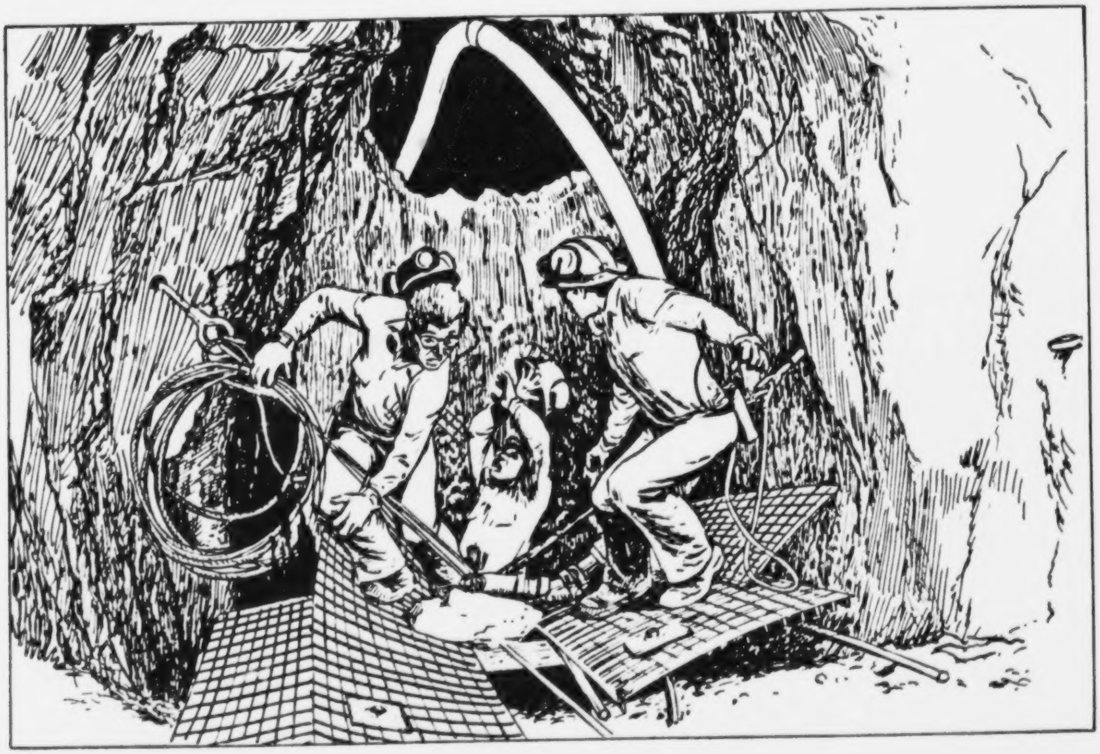
A mill operator, age 29, entered a limestone dust storage tank and was suffocated when buildup hanging on the bin sides slid in, covering him. His known mining experience was 4 years, all with this company.

Cause of accident: The direct cause of this accident was management's requiring employees to enter the bin when mechanical means for elimination of caked material could have been made available. Failure of the victim to obtain and properly use the provided safety equipment and failure to have a second person attend the lifeline contributed to the severity of the accident.

December 13, 1978

A shaft miner, age 30, was fatally injured when he fell 65 feet down a borehole. He had 3 1/2 years mining experience, the last 7 months at this job classification.

Cause of accident: The basic cause of this accident was failure of management to provide and enforce the use of safety lines of proper length. The victim was using a 20 ft. long cable sling.



December 27, 1978

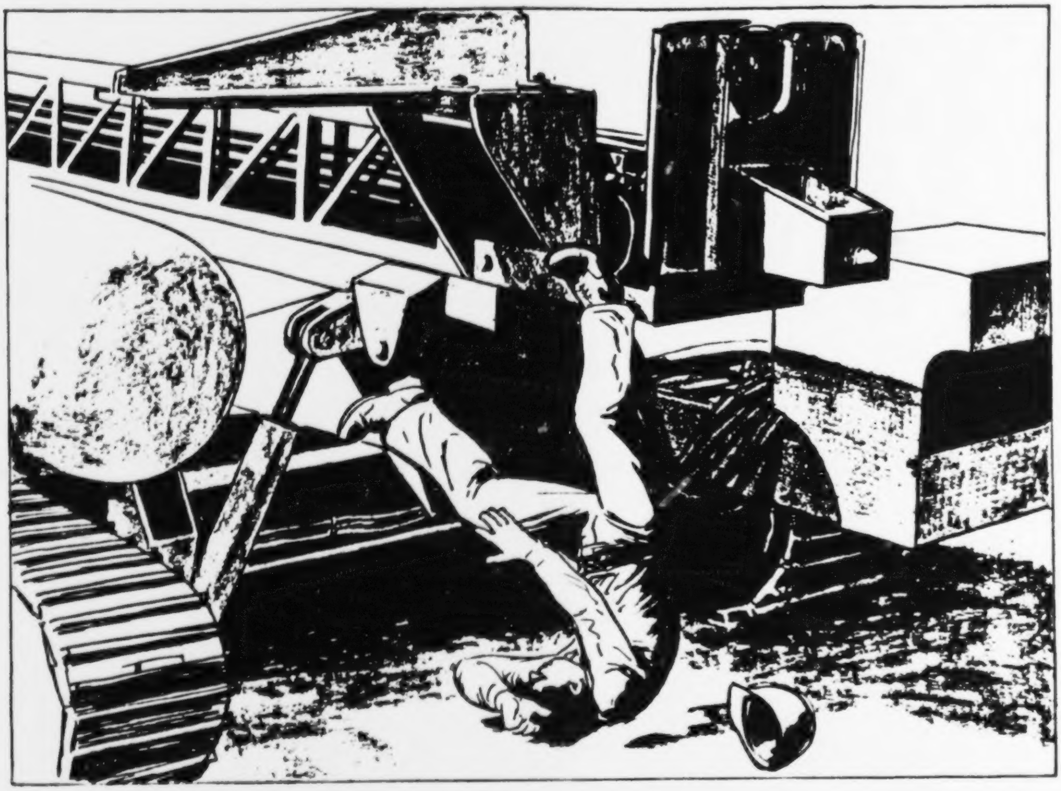
A mine laborer, age 19, was fatally injured when he fell approximately 70 feet down a vent raise when the work platform on which he was standing collapsed. He had 40 days mining experience.

Cause of accident: This accident was caused by a failure to provide a safe work platform. Management's failure to enforce the use of a safety belt and line contributed to the severity.

January 9, 1979

A mechanic, age 36, was severely crushed and received multiple skull fractures when he fell approximately 50 feet from a maintenance platform. He had a total of 10 years mining experience, 17 months at this occupation.

Cause of accident: The direct cause of this accident was failure of the work platform and defective crane controls. A contributing factor was failure of management to provide and enforce wearing of safety belts and lines at working sites where there is a danger of falling.



January 16, 1979

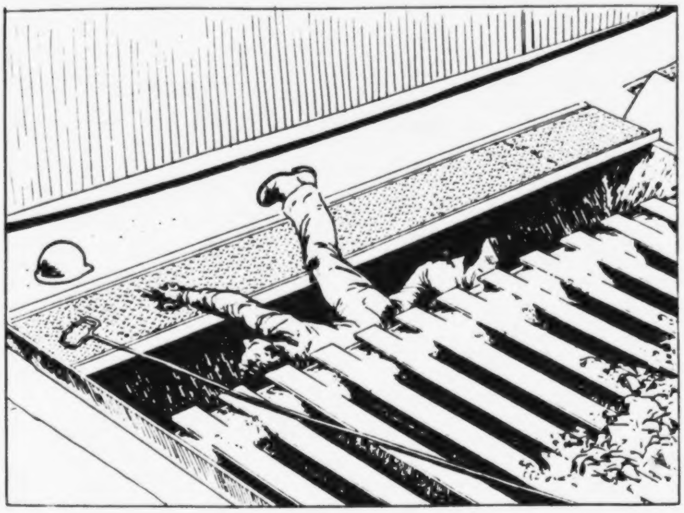
A general laborer, age 19, died as a result of suffocation when the material he was standing on collapsed and engulfed him. He had entered a finger raise, being pulled from the bottom, in preparation to enlarge or bell-out the finger at the top. He fell approximately 26 feet. His total known mining experience was 11 months.

Cause of accident: The primary cause of this accident was failure of management to provide a safe access and a safe work platform at the finger opening. Secondary to this primary cause was supervision's failure to enforce the use of a safety belt and line; also, the victim was allowed to perform work alone in an area where a hazardous condition existed.

January 18, 1979

A laborer, age 19, was fatally injured when he fell through a grizzly into a coal chute and was drawn into a rotating coal breaker. His total mining experience was 3 1/2 months, 5 days on this job site.

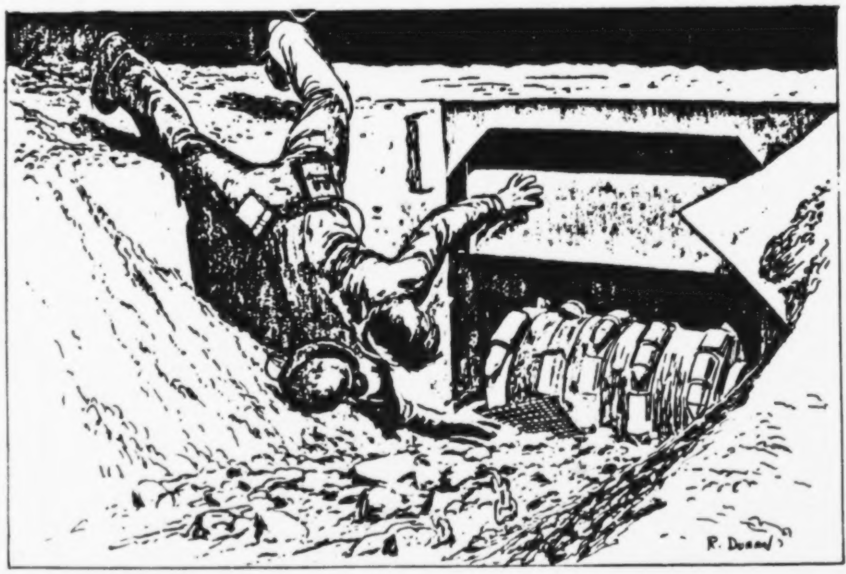
Cause of accident: A railing or barrier was not provided to prevent workmen from falling into the coal chute. Safety belts were not worn by the workmen who entered onto the grizzly over the coal chute where there was a danger of falling.



March 2, 1979

A mobile equipment operator, age 63, was fatally injured when he fell into a conveyor load-out cavity, 23 ft. width by 28 feet deep. He had 27 years total mining experience, 6 years at this facility.

Cause of accident: Victim entered coal storage area without an adequate communication system and without safety belts and lines provided.



March 20, 1979

A general laborer, age 22, suffered fatal head injuries when he slipped and fell 21 feet to a cement floor. His total mining experience was 2 months and 3 days.

Cause of accident: The direct cause of this accident was failure of management to establish a safe work procedure for handling palleted brick. Contributing factors were the inadequately protected work area created by the unnecessary removal of a railing section and failure to wear a safety belt and line while working near the opening.

April 7, 1979

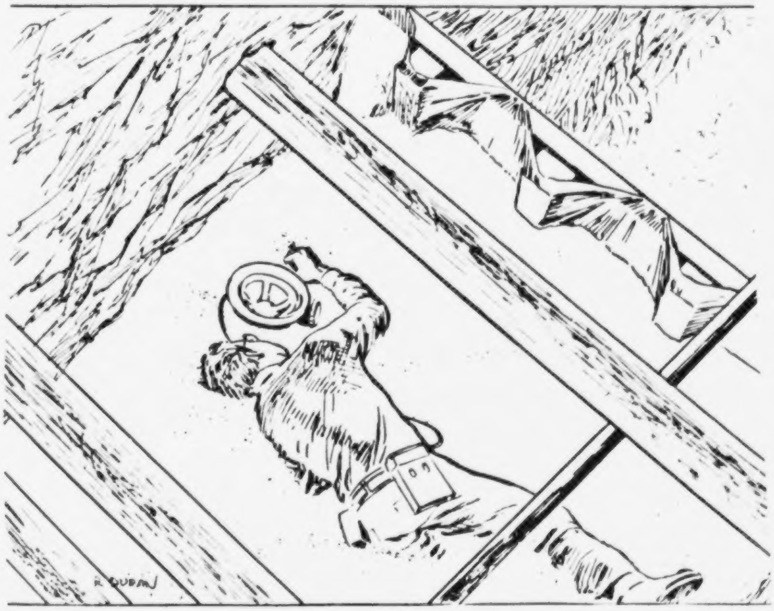
A kiln burner helper, age 22, died as a result of suffocation in a conveyor bin entrapment accident. He had a total of 10 months mining experience.

Cause of accident: The direct cause of this accident was failure to de-energize and lock-out the conveyor belt system. A contributory cause may have been the lack of communication between the loader operator and the victim. Also, entry into a bin without safety belt and tie-off line with a second person in attendance contributed to the severity of this accident.

June 4, 1979

A crusher helper, age 21, was fatally injured when he apparently fell or slipped into a gravity flow sand hopper (There were no witnesses to the accident). His total known mining experience was 4 months.

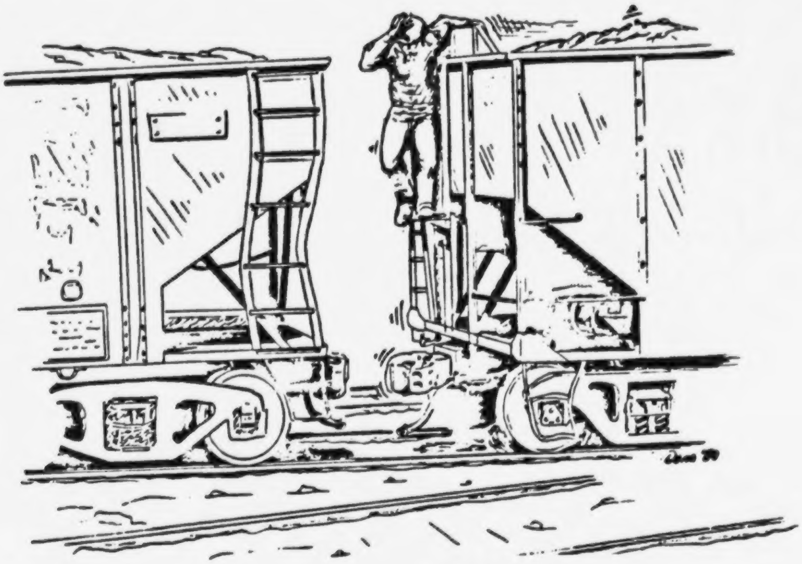
Cause of accident: The direct cause of this accident was failure of management to provide a safe work area with adequate guarding/handrails at the grizzly. Failure to provide and enforce the use of a safety belt and line where a danger of falling existed contributed to the severity of this accident.



June 8, 1979

A utility man, age 44, was fatally injured when he fell and was dragged approximately 124 feet between two railroad cars. He had 5 1/2 years total mining experience, all at this facility.

Cause of accident: The accident occurred due to failure of management to require persons dropping railroad cars to wear safety belts.



August 1, 1979

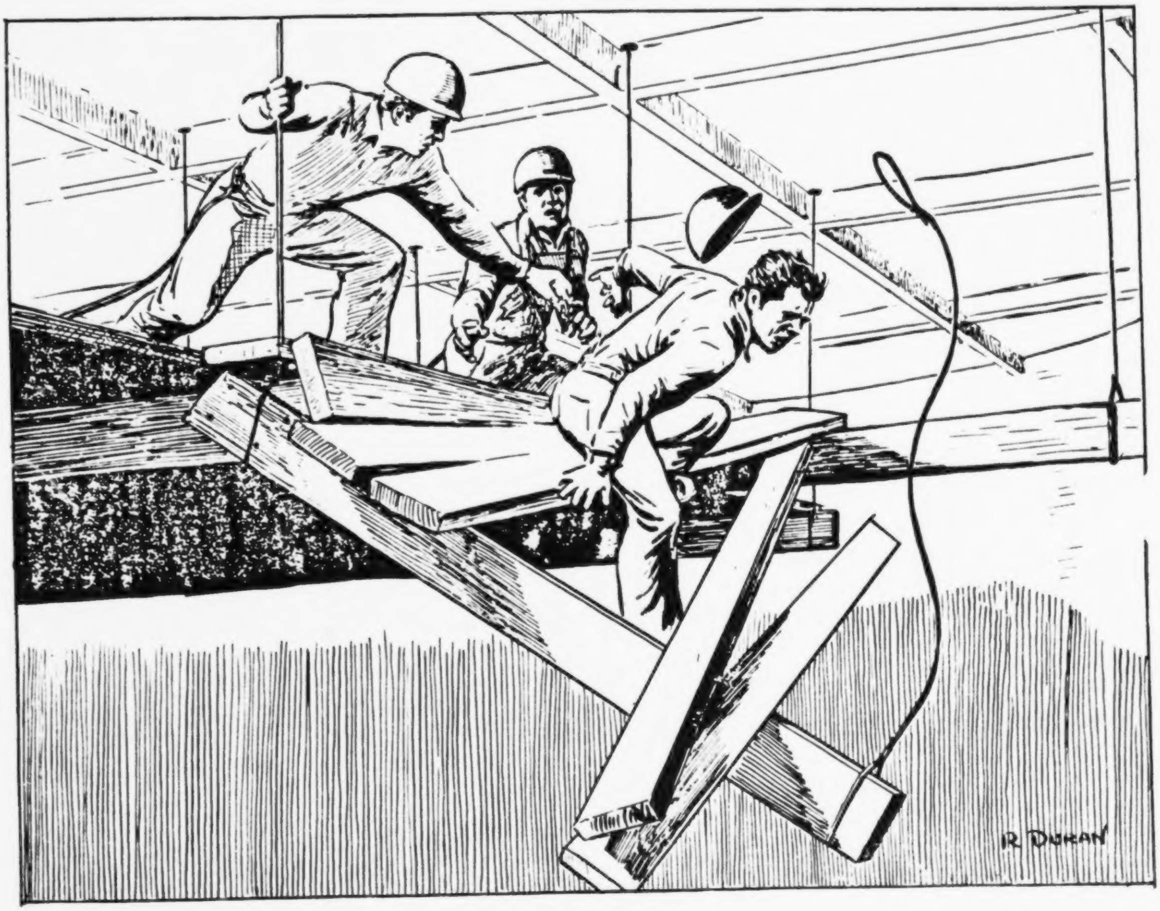
An assistant mill operator, age 36, died as a result of suffocation when he was buried under about 7 feet of crushed ore when the bridged material he was standing on collapsed. He had a total milling experience of 5 years and 10 months, all with this company.

Cause of accident: The primary cause of this accident was management's failure to establish a safe work procedure for entering storage bins. Lack of a reliable means for hook-up and failure to enforce the use of a safety belt and line, with a second person attending the lifeline, were contributing factors.

September 20, 1979

A welder, age 23, suffered fatal head and internal injuries when he fell approximately 26 feet from the second floor of the plant to the first floor while installing metal decking. He had 3 years construction experience including 2 years as a welder.

Cause of accident: The accident occurred because a safety belt or an equivalent means of protection was not used during the installation of metal decking. The major factor contributing to the disuse of the safety belts was failure of management to provide a means for attaching the belts that would provide the required movement needed by the employees while installing decking.

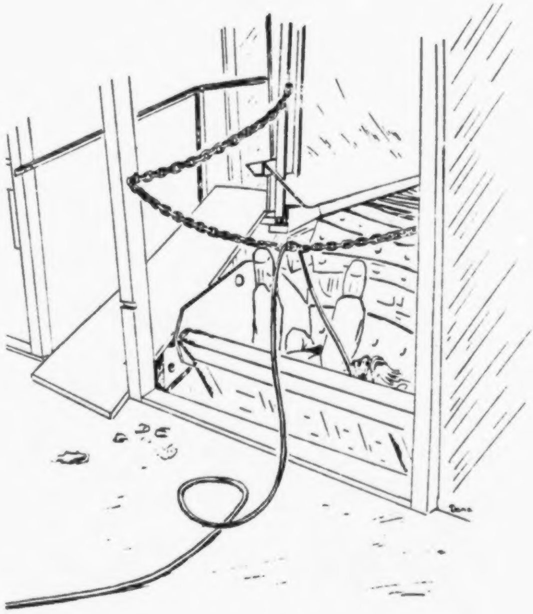


November 12, 1979

A crusher operator, age 68, suffered massive trauma to the entire body when he fell head first into a jaw crusher. He had 14 years experience with this company.

Cause of accident: The reason for the victim to be near or over the crusher cannot be determined as there were no witnesses to the accident. One or more of the following conditions contributed to the accident:

1. one of the chain guards may not have been secured;
2. failure to wear a safety belt and line;
3. the victim placed himself in an unsafe position too near the opening of the crusher



October 8, 1979

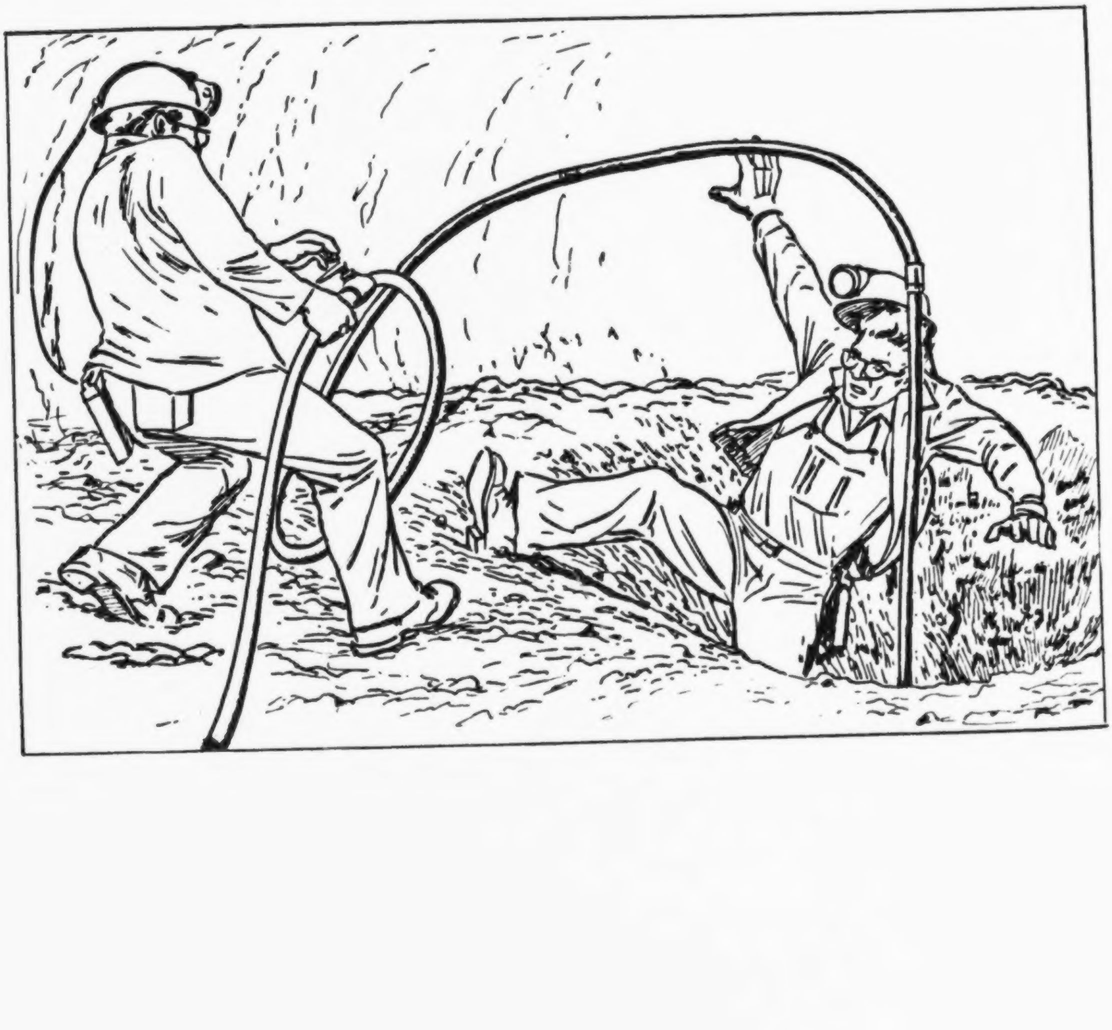
An ironworker, age 41, received fatal head injuries when he fell approximately 25 feet to the bottom of a cyclone. He had 17 years experience.

Cause of accident: The direct cause of this accident was failure of management to provide a safe means of entry and exit at the cyclone. Steps, handrails, or guards were not provided to prevent falling. Tie-offs were not provided that would allow workers to exit with safety lines attached.

December 14, 1979

A crusher operator, age 59, was fatally injured when the bridged material he was standing on inside a stone bin collapsed and pulled him into the open chute. He was engulfed by crushed stone. He had 23 years of mining experience with this company; 15 years were as a secondary crusher operator.

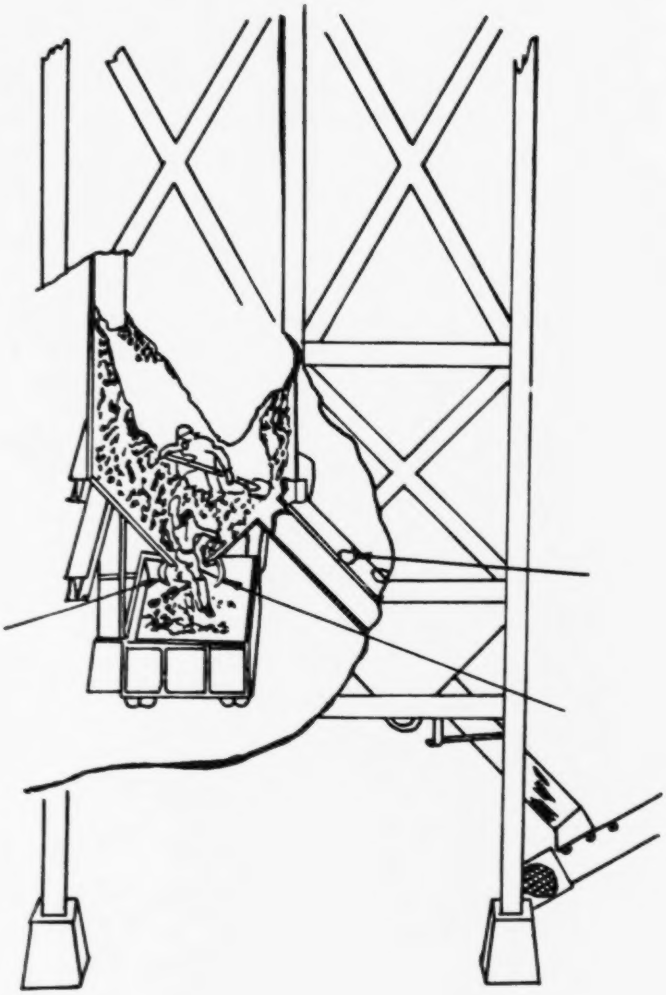
Cause of accident: The direct cause of this accident was the victim entering the stone bin and standing on top of material that was bridged. Contributing cause was failure of the victim to obey company regulations which require using a safety belt and line when bins are entered.



December 14, 1979

A crusher operator, age 59, was fatally injured when the bridged material he was standing on inside a stone bin collapsed and pulled him into the open chute. He was engulfed by crushed stone. He had 23 years of mining experience with this company; 15 years were as a secondary crusher operator.

Cause of accident: The direct cause of this accident was the victim entering the stone bin and standing on top of material that was bridged. Contributing cause was failure of the victim to obey company regulations which require using a safety belt and line when bins are entered.



Report compiled by Shirley Quisenberry, Safety Specialist, Health and Safety Analysis Center, Denver, Colorado

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

THE LAST WORD

The first 60 days of the year are now history. The remaining 305 are still a mystery. So continue in safety as you have in the past and the year will be pleasant right up to the last day.

How often have you seen one driver try to bluff out another at an intersection? This "me first" attitude is a way that many drivers get in trouble. Poker players always say that you shouldn't bluff unless you can afford to lose. In traffic you can NEVER afford to lose - so don't bluff.

Wouldn't if be nice if anyone tempted to point a finger would hold out a hand instead?

Some say that accidents are just plain bad luck, but I think if you investigate it enough you will find that someone has been pushing their luck somewhere along the line.

Speaking of accidents - go ahead and take that chance. After all, a fatal accident happens only once in a lifetime.

No two people see things the same. The same facts seen differently are the cause of many an argument. Two laborers were looking at a brick wall when one said: "Can you tell me what keeps the bricks together?"

"The mortar, of course," was the answer.

"Not by a blamed sight," said the other. "That is what keeps them apart."

How often have you seen someone in the car in front of you looking in their rear view mirror to comb their hair? Only a few seconds of inattention at highway speeds can put you right in the middle of an accident.

At that point, it won't matter at all about the condition of your hair.

Remember, drive as if your life depended on it because it does.

Until next month, remember, the last thing you want is an injury, so practice safety first.

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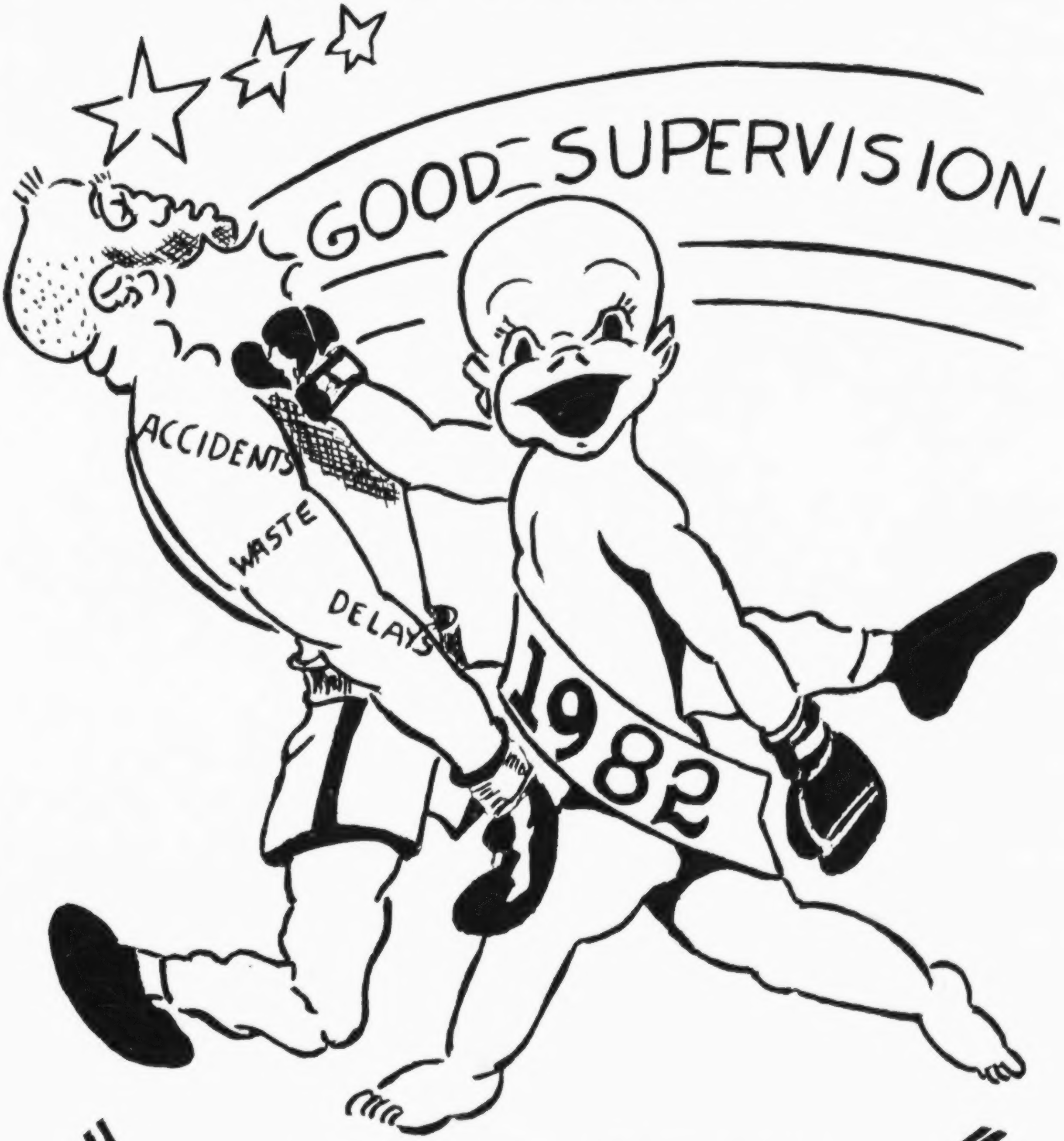
ATTENTION: We are pleased to announce that Ford B. Ford, Assistant Secretary for MSHA, will be the featured speaker at the dinner meeting of the Pennsylvania Bituminous Council, held at the Rustic Lodge, Indiana, Pennsylvania, at 6:00 p.m., on March 19, 1982. Mr. Ford, recently confirmed as Assistant Secretary grew up in a coal-mining area of Virginia before moving to California to become the first chair of the California Occupational Safety and Health Appeals Board. Further information regarding the meeting can be obtained by contacting John O. Miller, Post Office Box A, Hastings, Pennsylvania, 16646. (814-247-8239)

HOLMES SAFETY ASSOCIATION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Mine Safety and Health Administration

HOLMES SAFETY ASSOCIATION
MEETING REPORT FORM

For the month of ______________

TOTAL meetings held this month __________

TOTAL attendance this month _____________

Chapter Number _________ (See address label, if incorrect, please indicate change.)

____
(Signature)

____
(Telephone No.)

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(Title)

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BULLETIN

"SAFETY"
It's Up to You,
In '82

MSHA

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HOLMES SAFETY ASSOCIATION

in this issue....

March 1982

1. Safety Topic, "'Safety' It's up to You in '82"
2. Safety Topic, "Welcome New Members"
3. Part 48 Training Modules-Coal-Surface and Underground Series: (Division of Audio Visual Services)
4. Safety Topic, "People and Machines"
5. Safety Topic, "He Knew -- But He Forgot"
6. Safety Topic, "Accidents or Mistakes?"
7. Safety Topic, "What is an Accident?"
8. Safety Topic, "What is Safety?"
9. Abstract, "Powered Haulage Accident"
10. Safety Topic, "Shuttle-Car Operators"
11. Abstract, "Fall-of-Person (Suffocation) Accident"
12. Safety Topic, "Part 77--Subpart Q--Loading and Hauling"
13. Safety Topic, "Part 55.12--Electricity"
14. The Last Word
15. Meeting Report Form (chapters only)

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

"SAFETY" It's Up to You, In '82

The ability to look behind us, study the causes, and see the severity of some of the mine accidents and disasters that occurred during 1981, should only intensify our resolution to take a more active part in their elimination. Much of this can be accomplished through your safety chapters and district councils of the Holmes Safety Association. We are the nucleus and coordinating unit for mine safety in all mineral extractive areas. Have we done enough? The record implies that we haven't.

We can improve by increasing our membership and increasing the active participation of those who attend. It was once said, "the more expensive a person's knowledge of what has to be done, the greater will be their power of knowing what to do." Everyone connected with the mining industry has "something" to contribute toward mine safety, whether they represent management, labor, inspection services or other allied interests.

We now have two beginnings, our year of '82 and our new slate of elected officers. These officers must have our active support. We are in a favorable position to succeed. We can look behind for knowledge, then look ahead and apply it in our concerted efforts to eliminate mine injuries.

We could be on the brink of a new golden age of safety for the mineral extractive industries - it depends on you and me.

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WELCOME NEW MEMBERS

October 1981

Texasgulf Metals Company
Texasgulf Metals-Gold
Victor, Colorado

The New River Company
Siltix Mine
Mount Hope, West Virginia

The New River Company
Meadow Creek Prep Plant
Meadow Creek, West Virginia

Beckley Lick Run Company
Bonny Mine
Clear Creek, West Virginia

Beckley Lick Run Company
Bonny Prep Plant
Clear Creek, West Virginia

The New River Company
Skelton Mine
Stanaford, West Virginia

Harrison Fuel Inc.
Harrison Fuel
Fairmont, West Virginia

Larry Terry Contractor, Inc.
McCormick Pit No. 1
Decatur, Alabama

Cordero Coal Company
Cordero Mine
Gillette, Wyoming

Wyoming Fuel Company
Tri County Mine
Perry, Missouri

The Kentucky Stone Company
Flemingsburg-Limestone
Flemingsburg, Kentucky

The Kentucky Stone Company
Todd-Limestone
Elkton, Kentucky

The Kentucky Stone Company
Pulaski-Limestone
Somerset, Kentucky

The Kentucky Stone Company
Franklin-Limestone
Woodburn, Kentucky

Rinker Southeastern Materials
Rinkers Miami-Limestone
Miami, Florida

American Mine Services, Inc.
McLoughlin Mine-Gold
Lower Lake, California

American Mine Services, Inc.
American Mill-Gold
Fairplay, Colorado

American Mine Services, Inc.
16-1 Mine-Silver
Silverpeak, Nevada

American Mine Services, Inc.
Bold Mt. & Ibex Mine-Gold
Baker, Oregon

American Mine Services, Inc.
Lead Mine-Gold
Lead, South Dakota

WELCOME NEW MEMBERS

Jacobs Creek Stone Co. Inc.
Davidson County Quarry-
 Dimension Shale
Denton, North Carolina

Black River Lime Company
Black River Mill-Stone/Lime
Carntown, Kentucky

Union 76
Parachute Creek-Oil Shale
Parachute, Colorado

State Board for Technical
 and Comprehensive Education
S.C. MSHA Grants & Operators-
 Mica, Stone, Formulicate
Columbia, South Carolina

Minerals Exploration Company
Sweetwater Project-Uranium
Sweetwater, Wyoming

Alhambra Mines
Ruby Mine-Gold
Forest City, California

November 1981

Sunfire Coal
Sunfire No. 3
Jett, Kentucky

Sunfire Coal
Sunfire No. 4
Jett, Kentucky

Hammer Coal Company, Inc.
Hammer Mine
Tannersville, Virginia

Reb Mining, Inc.
Reb Mining
Grundy, Virginia

December 1981

White Rock Coal Company, Inc.
White Rock Mine
Hurley, Virginia

Cowin and Company
Lick Creek Portal Pond
 Creek No. 1-Construction
Rawl, West Virginia

Cowin and Company
Mary Lee No. 1-Construction
Goodsprings, Alabama

Fred D. Mitchell and Son
Fred D. Mitchell-Sand
Mayodan, North Carolina

DEPARTMENT OF LABOR
UNITED STATES OF AMERICA

PART 48 TRAINING MODULES - COAL - SURFACE AND UNDERGROUND

The training modules in this series were prepared* to help instructors in the mining industry and allied educational institutions provide effective health and safety training and retraining as mandated by the Federal Mine Safety and Health Act of 1977.

Most of the modules are designed specifically for the training of either surface or underground, inexperienced or experienced coal miners. An instructor's manual is included as the first module. In addition to providing training instruction it contains: a complete list of modules in the training program, a bibliography, and a glossary. Two modules are included for the hazard training required for non miners/mine visitors, one for surface and one for underground mines. A module is also provided for health and safety training for coal preparation plant personnel.

Each module in this series is a self-contained unit that provides a sample lecture that will fulfill suggested objectives. Visual materials and handouts that go with the lecture (illustrations, self-checks, etc.) are at the end of each module and may be reproduced on a copier. Sets of 35 mm. slides and overhead transparencies of the visuals in the modules as well as applicable motion picture films are also available from MSHA (contact the Division of Audio Visual Services for information regarding the availability of visual materials).

The training modules are available in two master sets supplied as kits from which instructional material can be selected for use in each of three Part 48 training categories, "Training of New Miners," "Training of Newly Employed Experienced Miners" and "Annual Refresher Training." One master set applicable to surface coal mining consisting of 23 modules is available for purchase for $20. The other master set applicable to underground coal mining and consisting of 27 modules is priced at $25. The module "Coal Preparation (with Plant Tour supplement)" is included in the master surface set and is also available separately for $1.50.

All instructional materials listed below are offered for sale only, and the prices (determined by contractual reproduction costs) are subject to change without notice. To obtain instructional materials, please submit a written request or purchase order to: Chief, Division of Audio Visual Services; Education and Training; MSHA; 4300 Forbes Avenue; Pittsburgh, PA 15213. Address inquiries to this address for information regarding availability of audiovisual materials applicable to the modules. Telephone requests for purchases will not be accepted. Also, DO NOT ENCLOSE PAYMENT WITH YOUR ORDER. You will be billed by our finance office.

To order master sets by number:	MSHA P4800 - Both Sets	$42.00
	MSHA P4801 - Underground	$25.00
	MSHA P4802 Surface - Includes Coal Preparation	$20.00
To order preparation plant module:	MSP48M0241 - Coal Preparation	$1.50

****

**This program was developed by the Mining Extension Service of West Virginia University for the Mine Safety and Health Administration under U.S. Bureau of Mines contract number J0188069.*

March 1982

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

People and Machines

One of the chief differences between a person and a machine is that the machine will do what it is designed to do every time you give it the necessary stimulus, while a person may or may not. Here is an illustration of what we mean.

Recently, several men who worked for a printing establishment were unloading supplies from an automatic passenger elevator which was at the first floor level. One of the men stepped into what he thought was the elevator, but which was in fact an empty elevator shaft. He fell to his death at the basement level.

The reason the elevator wasn't there was that the men had failed to set a safety catch which would have held the elevator at the ground level. Consequently, when someone pushed the button to summon the elevator to another floor, the elevator did exactly what it was designed and built to do. It went to the other level, leaving the elevator shaft empty at the first-floor level.

In other words, the machine did what it was supposed to do. The mem did not.

He Knew -- But He Forgot

So many accidents occur to those who know how to work but in actually doing the work forget their safety training. This always proves an expensive and painful forgetting. We just cannot forget about safety for a moment. A moment is all the time it takes for an accident to happen.

One of our men went home one evening and told his wife and children about a safety meeting that he had attended at the plant that day where he and his buddies were shown the proper way to lift. He demonstrated to his family that the large muscles of the legs and thighs should carry the load, and not the muscles of the back, which were not designed by nature for bearing heavy strains. A few days later, he came home with a badly sprained back and had to confess with considerable embarrassment that he had lifted the wrong way -- that he had done just what he had shown them that he should not do. He was in bed for several days, and his wife and children had to explain that he knew how to lift, but he forgot.

How many accidents and how many deaths must be charged each year to the demon forgetfulness.

A keen mind in a vigorous, healthy body is our best safeguard. Let us keep our bodies fit and our minds alert, so it will never be necessary to say of us: He knew -- but he forgot.

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Accidents or Mistakes?

"Accident" means an occurrence which is sudden, unexpected, and unforeseen.

In your early days, when your pants were just a square of white cloth, your mother, excused many a mishap by saying "It was just an accident, you couldn't help it, you didn't mean to do it." And she was right--your knowledge and experience did not enable you to foresee the results of your acts. But this idea planted in childhood, that sudden unplanned events are excusable, is hard to erase.

Such thinking has hindered the progress of safety for years. We have learned that practically all of these so-called accidents are preventable. They are not the result of mere chance or bad luck. They are caused by somebody's failure to think or plan or to take known precautions to work the safe way.

We can foresee, for example, that if miners do not wear eye protection, sooner or later, eyes will be lost. When such results are both foreseeable and preventable, how can they be called accidents? When we know that some action, if continued, will surely produce a known effect, the result is not accidental.

Can we throw off the shackles of disproven ideas, wrong words which tie up with the idea of excusability?

Real accidents, events which are unpredictable and unpreventable, are very rare. Mistakes and errors which lead to injuries are common, but they are not accidents.

Instead of misnaming and thus, to some extent, excusing these mistakes, let's use the word "accident" less frequently. Instead of preventing accidents, let's prevent mistakes by learning to work right. Let's achieve safety!

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

What is an Accident?

What is an accident? Some people think of it as a misadventure, while others dismiss it as an unforeseen or unexpected event, or as a matter of bad luck.

In the interest of living longer, it is a mistake to treat the world so offhandedly. Every accident is caused by something--an unsafe act, an unsafe practice, or an unrealized hazard. It is not 'luck,' which is only a word we use to cover our defects of knowledge. If we wish to live, we must apply our intelligence so as to preserve ourselves.

The shocking fact is that, in keeping with industry and finance which have become computerized to keep up with business--death, too, must be using a computer to count the victims of accidents.

But death by accident is not merely a statistical fact to be tabulated. Death is a personal thing; there is a shocking finality to it.

A key word is 'carelessness.' The poison taken by mistake kills just as certainly as that taken deliberately. The heedlessly driven automobile kills just as certainly as the deliberately dropped bomb. The fire caused by a cigarette kills just as certainly as that started deliberately by an arsonist. No one can escape responsibility by pleading thoughtlessness.

Stop unsafe acts and unsafe conditions and you'll prevent accidents from happening!

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

What is Safety?

Safety is defined in the dictionary as "freedom from danger or risks."

This is it in a nutshell, but, like most thumbnail definitions, the real meaning of the word is far greater.

One way to appreciate the full value of safety is to consider what it isn't.

Safety is not just wearing goggles in the presense of potential danger to the eyes; rather, safety is the intelligent purpose which leads to the determination not to leave the eyes exposed to hazard.

Safety is not just obeying highway traffic signs; safety is the personal realization that driving always requires maximum caution from everyone.

Safety is not just statistics; these are only a thermometer to measure safety performance. Safety is doing things the safe way as a matter of ingrained habit, and not just because the boss might be looking.

Safety is not something for the other person to apply; safety is the responsibility of each of us, with no exceptions.

If safety is to cut deeply into our accident records, it must be more than blind adherence to rules and practices, important as these are. Safety is a religion whose creed for its believers is, "I must never have an accident myself nor contribute to one by my personal failure."

All religions have their creeds, the foundations upon which their teachings build. It is no different with safety, which should be one 'religion' which there is no difference of opinion.

ABSTRACT
FROM
FATAL ACCIDENT

March [illegible]

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

POWERED HAULAGE ACCIDENT

General Information: A powered haulage accident occurred in a crosscut in the pillar section of a mine resulting in the death of a miner who was working, the continuous miner operator helper, and injuries to the roof bolter helper. The victim had about 4 years of mining experience. The accident occurred while they were running from behind the continuous miner to escape a pillar cave, and were struck by the shuttle car as it was also tramming away from the continuous miner. The accident was caused by the victim's and the shuttle car operator's hasty retreat from the pillar cave and their unawareness of each other's presence in the crosscut.

Description of Accident: Immediately prior to the accident, mining of the final stump of the left fender was proceeding with a Joy 12CM continuous miner. The victim had been assigned to help the continuous miner operator helper with the continuous miner trailing cable during the mining of the final pushout stump. After half a shuttle car of coal had been mined, the shuttle car operator, looking over his left shoulder, observed two small pieces of coal fall from the roof. Sensing the impending pillar cave, he started to tram his shuttle car away from the continuous miner. At about the same time, the turn timbers, leading into the left, began to take weight and someone hollered to back out the continuous miner. Upon hearing the timbers take weight, and the holler, the crew turned and ran out of the place. The roof bolter helper stated that he was the first one to leave, and that he never noticed the shuttle car start to move. He felt the concussion from the pillar cave, and then felt himself being knocked down and rolled on the mine floor. At first he thought he was being caught by the pillar cave, but after being freed in the intersection, he could tell that he and the victim had been hit by the shuttle car. Following the accident, the roof bolter helper and the victim came to rest in the entry. The pillar split, adjacent crosscuts, and entries were roof bolted in accordance with the approved roof control plan. Breaker timber, roadway and turn timbers were also set in compliance with the approved roof control plan.

Conclusion: The pillar cave that preceded the fatal powered haulage accident occurred suddenly and gave no warning. The section foreman stated that during the mining of the left fender of the pillar, the roof had not been working or showing any signs of a fall. The first indication of the fall was immediately prior to the cave, when the timber beside him started taking weight. The shuttle car was found to be in safe working condition. The shuttle

The operator [illegible] away from the [illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Shuttle-Car Operators

Our safety meeting for today concerns the job of the shuttle-car operator, an occupation that accounts for a number of lost-time accidents.

A great percentage of injuries are caused by haulage accidents, sprains and strains, and roof and rib falls.

Let's briefly discuss each of these.

Haulage. The first requirement for the safe and efficient performance of your job is that your shuttle car be in good mechanical condition. You should check your car thoroughly before making the first trip which should include the brakes, steering, lights, signal alarm, and cable. If repairs are needed, let the section supervisor know, so the condition can be corrected. Operating a defective shuttle car not only endangers yourself, but other people on the section as well.

In your travels over the section, you must be constantly alert and always have your shuttle car under control. Always face in the direction of travel except when you are maneuvering under the boom of the loading machine. You should always keep your entire body within the confines of the seating compartment. Many incidents are recorded where operators of shuttle cars have been dragged from their equipment because some part of their bodies were either above or outside the car. The possiblility of being bounced against the roof will be lessened if you keep your head down when in low coal, and also if you keep the roadways free of fallen material.

Sprains and strains. Most of these injuries have resulted from improper lifting. Shuttle-car operators are often called on to load and distribute supplies, help set timbers and crossbars, and to help the electricians and mechanics take heavy repair parts to the face area. I know of no easy way to perform these heavy lifting duties, but I do think they can be handled without anyone being hurt. Don't attempt to lift anything that is too heavy or bulky for you to handle safely; instead, ask for help. There is usually enough people on the section to give you a hand. As I have said before, when you are lifting heavy objects, lift with your legs--not your back.

Roof and rib falls. Many shuttle-car operators have been injured by roof falls caused by the accidental dislodgment of roof supports. The most important thing to consider when operating your car in closely-timbered areas is that your speed will need to be reduced.

One careless or thoughtless moment and your car can be in the timberline. Reduce your speed and keep your car in the runway.

My final thought to you is that if you see any loose roof, ribs, or brows along the roadway, let the section supervisor know so that the situation can be corrected.

Shuttle-Car Operators

Outline

A. Three causes account for a greater percentage of the injuries to shuttle-car operators

B. Concentrate discussion on three main causes

1. Haulage -
    - a. Equipment in good condition
    - b. Face in the direction of travel
    - c. Keep body in the seating compartment
    - d. Keep roadways free of fallen material
2. Sprains and strains -
    - a. Lifting heavy objects part of your duties
    - b. Ask for help to handle heavy objects
    - c. Lift with your legs--not your back
3. Roof and rib falls
    - a. Accidental dislodgment of roof support
    - b. Reduce speed
    - c. Report any loose roof, ribs, or brows

ABSTRACT
FROM
FATAL ACCIDENT

March 1992

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

[illegible]

[illegible]

[illegible]

[illegible]

flow sand hopper and the victim's failure to position himself in a safe location. A citation was issued based on Part 56.11-12. The opening over the sand bin was not protected by railing or barriers or covers to prevent persons accidently falling into the sand bin.

Recommendations:

1. Men working on barge or storage piles should not walk, stand or sit immediately above a reclaiming area during unloading.

2. All employees and officials should be familiar with county, State, and Federal health and safety regulations applicable to their jobs.

3. Employees should be frequently alerted to the potential of accidents on their jobs.

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 77--Surface Coal Mines and Surface Work Areas of Underground Coal Mines
Subpart Q--Loading and Hauling

In today's session we will continue our discussion of the safety standards as they pertain to loading and haulage. The majority or fatal haulage accidents in a 5-year period were of two basic types: The haulage truck was involved in a collision with another vehicle or the truck left the road. The victim either jumped or was thrown from the equipment and was run over and crushed by the moving equipment. In 53 percent of the accidents the driver lost control of the vehicle. In a majority of the accidents, poor haulage surface conditions were cited as a contributing factor, characterized as wet or icy roads or loose material on the haulage surface. Inexperience and inattention of the truck drivers were also contributing factors.

Section 77.1607--Loading and haulage equipment; operation.

(a) Vehicles shall follow at a safe distance; passing shall be limited to areas of adequate clearance and visibility.

(b) Mobile equipment operators shall have full control of the equipment while it is in motion.

(c) Equipment operating speeds shall be prudent and consistent with conditions of roadway, grades, clearance, visibility, traffic, and the type of equipment used.

(d) Cabs of mobile equipment shall be kept free of extraneous materials.

(e) Operators shall sit facing the direction of travel while operating equipment with dual controls.

(f) When an equipment operator is present, men shall notify him before getting on or off equipment.

(g) Equipment operators shall be certain, by signal or other means, that all persons are clear before starting or moving equipment.

(h) Where possible, aerial tramways shall not be started until the tramway operator has ascertained that everyone is in the clear.

(i) Dust control measures shall be taken where dust significantly reduces visibility of equipment oeprators.

(j) Dippers, buckets, loading booms, or heavy suspended loads shall not be swung over the cabs of haulage vehicles until the drivers are out of the cabs and in safe locations, unless the trucks are designed specifically to protect the drivers from falling material.

(k) Men shall not work or pass under the buckets or booms of loaders in operation.

(l) Tires shall be deflated before repairs on them are started and adequate means shall be provided to prevent wheel locking rims from creating a hazard during tire inflation.

(m) Electrically powered mobile equipment shall not be left unattended unless the master switch is in the off position, all operating controls are in the neutral position, and the brakes are set or other equivalent precautions are taken against rolling.

(n) Mobile equipment shall not be left unattended unless the brakes are set. The wheels shall be turned into a bank or berm, or shall be blocked, when such equipment is parked on a grade.

(o) Lights, flares, or other warning devices shall be posted when parked equipment creates a hazard to vehicular traffic.

(p) Dippers, buckets, scraper blades, and similar movable parts shall be secured or lowered to the ground when not in use.

(q) Shovel trailing cables shall not be moved with the shovel dipper unless cable slings or sleds are used.

(r) Equipment which is to be hauled shall be loaded and protected so as to prevent sliding or spillage.

(s) When moving between work areas, the equipment shall be secured in the travel position.

(t) Any load extending more than 4 feet beyond the rear of the vehicle body should be marked clearly with a red flag by day and a red light at night.

(u) Tow bars shall be used to tow heavy equipment and a safety chain shall be used in conjunction with each tow bar.

(v) Railroad cars shall be kept under control at all times by the car dropper. Cars shall be dropped at a safe rate and in a manner that will insure that the car dropper maintains a safe position while working and traveling around the cars.

(w) Railroad cars shall not be coupled or uncoupled manually from the inside of curves unless the railroad and cars are so designed to eliminate any hazard from coupling or uncoupling cars from inside of curves.

(x) Persons shall wear safety belts when dropping railroad cars. (The intent of Section 77.1607(x) is to require persons dropping railroad cars to suitably attach safety belts to prevent falling.)

(y) Railcars shall not be left on sidetracks unless ample clearance is provided for traffic on adjacent tracks.

(z) Parked railcars, unless held effectively by brakes, shall be blocked securely.

(aa) Railroad cars and all trucks shall be trimmed properly when they have been loaded higher than the confines of their cargo space.

(bb) When the entire length of a conveyor is visible from the starting switch, the operator shall visually check to make certain that all persons are in the clear before starting the conveyor. When the entire length of the conveyor is not visible from the starting switch, a positive audible or visible warning system shall be installed and operated to warn persons that the conveyor will be started.

(cc) Unguarded conveyors with walkways shall be equipped with emergency stop devices or cords along their full length.

(dd) Adequate backstops or brakes shall be installed on inclined-conveyor drive units to prevent conveyors from running in reverse if a hazard to personnel would be caused.

(ee) Aerial tram conveyor buckets shall not be overloaded, and feed shall be regulated to prevent spillage.

Section 77.1608--Dumping facilities.

(a) Dumping locations and haulage roads shall be kept reasonably free of water, debris, and spillage.

(b) Where the ground at a dumping place may fail to support the weight of a loaded dump truck, trucks shall be dumped a safe distance back from the edge of the bank.

(c) Adequate protection shall be provided at dumping locations where persons may be endangered by falling material.

(d) Grizzlies, grates, and other sizing devices at dump and transfer points shall be anchored securely in place.

(e) If truck spotters are used, they shall be well in the clear while trucks are backing into dumping position and dumping; lights shall be used at night to direct trucks.

March 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
Subchapter N--Metal and Nonmetallic Open-Pit Mines
Part 55.12--Electricity

All of these standards are mandatory. Violations of a standard will subject the mine operator to an order or notice of violation as required by Section 8 of the Act.

55.12-1 Circuits shall be protected against excessive overload by fuses or circuits breakers of the correct type and capacity.

55.12-2 Electric equipment and circuits shall be provided with switches or other controls. Such switches or controls shall be of approved design and construction and shall be properly installed.

55.12-3 Individual overload protection or short-circuit protection shall be provided for the trailing cables of mobile equipment.

55.12-4 Electrical conductors shall be of a sufficient size and current-carrying capacity to ensure that a rise in temperature resulting from normal operations will not damage the insulating materials. Electrical conductors exposed to mechanical damage shall be protected.

55.12-5 Mobile equipment shall not run over power conductors, nor shall loads be dragged over power conductors, unless the conductors are properly bridged or protected.

55.12-6 Distribution boxes shall be provided with a disconnecting device for each branch circuit. Such disconnecting devices shall be equipped or designed in such a manner that it can be determined by visual observation when such a device is open and that the circuit is deenergized, and the distribution box shall be labeled to show which circuit each device controls.

55.12-7 Trailing-cable and power-cable connections to junction boxes shall not be made or broken under load.

55.12-8 Power wires and cables shall be insulated adequately where they pass into or out of electrical compartments. Cables shall enter metal frames of motors, splice boxes, and electrical compartments only through proper fittings. When insulated wires, other than cables, pass through metal frames, the holes shall be substantially bushed with insulated bushings.

55.12-9 (Reserved)

55.12-10 Telephone and low-potential signal wire shall be protected, by isolation or suitable insulation, or both, from contacting energized power conductors or any other power source.

55.12-11 High-potential electrical conductors shall be covered, insulated, or placed to prevent contact with low potential conductors.

55.12-12 The potential on bare signal wires accessible to contact by persons shall not exceed 48 volts.

55.12-13 Permanent splices and repairs made in power cables, including the ground conductor where provided, shall be:

(a) Mechanically strong with electrical conductivity as near as possible to that of the original;

(b) Insulated to a degree at least equal to that of the original, and sealed to exclude moisture; and

(c) Provided with damage protection as near as possible to that of the original, including good bonding to the outer jacket.

55.12-14 Power cables energized to potentials in excess of 150 volts, phase-to-ground, shall not be moved with equipment unless sleds or slings, insulated from such equipment, are used. When such energized cables are moved manually, insulated hooks, tongs, ropes, or slings shall be used unless suitable protection for persons is provided by other means. This does not prohibit pulling or dragging of cable by the equipment it powers when the cable is physically attached to the equipment by suitable mechanical devices, and the cable is insulated from the equipment in conformance with other standards in this part.

55.12-15 (Reserved)

55.12-16 Electrically powered equipment shall be deenergized before mechanical work is done on such equipment. Power switches shall be locked out or other measures taken which shall prevent the equipment from being energized without the knowledge of the individuals working on it. Suitable warning notices shall be posted at the power switch and signed by the individuals who are to do the work. Such locks or preventive devices shall be removed only by the persons who installed them or by authorized personnel.

55.12-17 Power circuits shall be deenergized before work is done on such circuits unless hot-line tools are used. Suitable warning signs shall be posted by the individuals who are to do the work. Switches shall be locked out or other measures taken which shall prevent the power circuits from being energized without the knowledge of the individuals working on them. Such locks, signs, or preventative devices shall be removed only by the person who installed them or by authorized personnel.

55.12-18 Principal power switches shall be labeled to show which units they control, unless identification can be made readily by location.

55.12-19 Where access is necessary, suitable clearance shall be provided at stationary electrical equipment or switchgear.

55.12-20 Dry wooden platforms, insulating mats, or other electrically-nonconductive material shall be kept in place at all switchboards and power-control switches where shock hazards exist. However, metal plates on which a person normally would stand and which are kept at the same potential as the grounded, metal, non-current-carrying parts of the power switches to be operated may be used.

55.12-21 Suitable danger signs shall be posted at all major electrical installations

55.12-22 Areas containing major electrical installations should be entered only by authorized persons.

55.12-23 Electrical connections and resistor grids that are difficult or impractical to insulate shall be guarded, unless protection is provided by location.

55.12-24 (Reserved)

55.12-25 All metal enclosing or encasing electrical circuits shall be grounded or provided with equivalent protection. This requirement does not apply to battery-operated equipment.

55.12-26 Metal fencing and metal buildings enclosing transformers and switchgear shall be grounded.

55.12-27 Frame grounding or equivalent protection shall be provided for mobile equipment powered through trailing cables.

55.12-28 Continuity and resistance of grounding systems shall be tested immediately after installation, repair, and modification; and annually thereafter. A record of the resistance measured during the most recent tests shall be made available on a request by the Secretary or his duly authorized representative.

55.12-29 (Reserved)

55.12-30 When a potentially dangerous condition is found it shall be corrected before equipment or wiring is energized.

55.12-31 (Reserved)

55.12-32 Inspection and cover plates on electrical equipment and junction boxes shall be kept in place at all times except during testing or repairs.

55.12-33 Hand-held electric tools shall not be operated at high potential voltages.

55.12-34 Portable extension lights, and other lights that by their location present a shock or burn hazard, shall be guarded.

55.12-35 Lamp sockets shall be of a weatherproof type where they are exposed to weather or wet conditions that may interfere with illumination or create a shock hazard.

55.12-36 Fuses shall not be removed or replaced by hand in an energized circuit, and they shall not otherwise be removed or replaced in an energized circuit unless equipment and techniques especially designed to prevent electrical shock are provided and used for such purpose.

55.12-37 Fuse tongs or hot line tools shall be used when fuses are removed or replaced in high-potential circuits.

55.12-38 Trailing cables shall be attached to machines in a suitable manner to protect the cable from damage and to prevent strain on the electrical connections.

55.12-39 Surplus trailing cables to shovels, cranes, and similar equipment shall be--

(a) Stored in cable boats;

(b) Stored on reels mounted on the equipment; or

(c) Otherwise protected from mechanical damage.

55.12-40 Operating controls shall be installed so that they can be operated without danger of contact with energized conductors.

55.12-41 Switches and starting boxes shall be of safe design and capacity.

55.12-42 Both rails shall be bonded or welded at every joint and rails shall be crossbonded at least every 200 feet if the track serves as the return trolley circuit. When rails are moved, replaced, or broken bonds are discovered, they shall be rebonded within three working shifts.

55.12-43 and 12-44 (Reserved)

55.12-45 Overhead high-potential powerlines shall be installed as specified by the National Electrical Code.

55.12-46 (Reserved)

55.12-47 Guy wires of poles supporting high-voltage transmission lines shall meet the requirements for grounding or insulator protection of the National Electrical Safety Code, Part 2, entitled "Safety Rules for the Installation and Maintenance of Electric Supply and Communication Lines," (also referred to as National Bureau of Standards Handbook 81, November 1, 1961) and and Supplement 2 thereof issued March 1968, which are hereby incorporated by reference and made a part hereof. These publications and documents may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, or may be examined in any Metal and Nonmetal Safety and Health District or Subdistrict Office of the Mine Safety and Health Administration.

55.12-48 Telegraph, telephone, or signal wires shall not be installed on the same crossarm with power conductors. When carried on poles supporting powerlines, they shall be installed as specified by the National Electric Code.

55.12-49 (Reserved)

55.12-50 Trolley wires shall be installed at least (7) feet above rails where height permits, and aligned and supported to suitably control sway and sag.

55.12-51 (Reserved)

55.12-52 (Reserved)

55.12-53 Ground wires for lighting circuits powered from trolley wires shall be connected securely to the ground-return circuit.

55.12-54 through 12-64 (Reserved)

55.12-65 Powerlines, including trolley wires, and telephone circuits shall be protected against short circuits and lightning.

55.12-66 Where metallic tools or equipment can come in contact with trolley wires or bare powerlines, the lines shall be guarded or deenergized.

55.12-67 Transformers shall be totally enclosed, or shall be placed at least 8 feet above the ground, or installed in a transformer house, or surrounded by a substantial fence at least 6 feet high and at least 3 feet from any energized parts, casings, or wiring.

55.12-68 Transformer enclosures shall be kept locked against unauthorized entry.

55.12-69 Each ungrounded power conductor or telephone wire that leads underground and is directly exposed to lightning shall be equipped with suitable lightning arrestors of approved type within 100 feet of the point where the circuit enters the mine. Lightning arrestors shall be connected to a low resistance grounding medium on the surface and shall be separated from neutral grounds by a distance of not less than 25 feet.

55.12-70 (Reserved)

55.12-71 When equipment must be moved or operated near energized high-voltage powerlines (other than trolley lines) and the clearance is less than 10 feet, the lines shall be deenergized or other precautionary measures shall be taken.

THE LAST WORD

March 1982

TEN DIGITS TO DEFEND

Check your hands. Open and close them. Touch something. Pick up something. Everyday occurrences? Perhaps. But few other living things possess the gifts we take for granted when we use our hands and fingers.

Progress has not been achieved by one's superior brain alone. It has taken the hands and fingers to do the brain's bidding. Our hands and fingers are the most efficient and useful tools on earth.

Blessed with these remarkable tools, we enjoy pleasure as well as progress. But whatever pleasure, whatever usefulness they bring we can vanish forever if we lose our fingers or our hands.

Despite the genius of modern science, there are no satisfactory replacements for hands and fingers. The sense of touch, the automatic reflexes, the ability to grasp and to maneuver, can never be duplicated by any artificial device.

One principal cause of hand injuries is getting hands or fingers caught between two objects. There is a name for these places where hands can be caught between objects. The name is "pinchpoints."

"Pinchpoints" are everywhere...auto doors...desk drawers...machinery in motion, and occur in piling material... using hand tools...handling brick... stamping...hooking...even in sports.

Two hands, ten fingers, and millions of movements--it's no wonder hand and finger injuries are a safety problem in industry.

"SAFETY"
It's Up to You,
In '82

HAND CARE

Some people spend a surprising amount of money and time to keep their car's finish clean, rustproof, and shiny. The wash-and-polish cycle is interrupted only when weather conditions are bad.

Many of these car owners who take such extra-special care of their cars don't give their skin a second thought.

When their hands get oily and greasy, they give them a quick cleanup with gasoline, naphtha, kerosene, turpentine, or strong lye soap.

These substances take away natural oils from the skin and may leave it irritated and inflamed.

Your safest cleanup bet is an old standby--soap and water. A soft brush will help them do an even better job.

EYES ARE EVERYTHING

"Whenever I draw a face," an artist said recently, "I start with the eyes. And when I've finished the eyes, I know whether or not I've got the face right, because the eyes are everything."

In a person's eyes, you see the very stuff they're made of: fire, sparkle, determination, dullness, imagination, hate, hope, love. And through a person's eyes, they see the very stuff their life is made of: earth, sky, loved ones, work, their world--just about everything he knows.

Eyes. The best two reasons we know of for proper eye protection.

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United States Department of Labor
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Mine Safety and Health Administration

HOLMES SAFETY ASSOCIATION
MEETING REPORT FORM

For the month of ______________

TOTAL meetings held this month __________

TOTAL attendance this month _____________

Chapter Number _________ (See address label, if incorrect, please indicate change.)

____
(Signature)

____
(Telephone No.)

____
(Title)

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APRIL 1982

HOLMES SAFETY ASSOCIATION

SAFETY EFFICIENCY

MINERAL INDUSTRIES

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

in this issue....

APRIL 1982

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2. Safety Topic, "1981 Injury Data"
   "Did You Know?"
   "Doing Something About Safety"
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4. Abstract, "Bump Accident"
5. Safety Topic, "Clarification of Standard 55.12-19--Suitable Clearance Around Stationary Electrical Equipment"
6. Safety Topic, "Part 55.13--Compressed Air and Boilers"
7. Safety Topic, "Part 75--Subpart E--Combustible Materials and Rock Dusting"
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   "Don't be a Slave to Safety"
8. Safety Topic, "Part 77--Subpart R--Miscellaneous"
   "We Believe"
9. Safety Topic, "The Roof Fall Problem"
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11. Safety Topic, "Safety is Everyone's Business"
12. Safety Topic, "Sell Safety "
    "Good Example"
13. Safety Topic, "Vacation Safety"
    "Sound Familiar?"
14. Poster, "We Need You"
15. Safety Topic, "Insights-Supervisor's Self Examination"
16. Announcement, "Hurry, Hurry, Hurry"
17. Meeting Report Form (chapters only)

WITH THIS ISSUE THE BULLETIN IS RESUMING NORMAL SCHEDULE
THANK YOU FOR YOUR PATIENCE

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WELCOME
NEW MEMBERS

January 1982

Brown and Root-Houston
Houston Mine
Houston, Texas

Western Fuels-Utah Inc.
Utah Mine
Rangely, Colorado

U S Gypsum
Shoemaker Mine-Gypsum
Lewistown, Montana

Cyprus Industrial Minerals
Cyprus Industrial Minerals-Talc
Ennis, Montana

Big Bear Mining Company
Prep Plant No. 1
Lynco, West Virginia

Big Bear Mining Company
Big Bear No. 4
Lynco, West Virginia

February 1982

Coal Creek Mining
Coal Creek
Ashland, Montana

Thunder Mountain Mining Company
Mayflower Mine-Gold
Alleghany, California

Carbon Fuel Company
Carbon Mine
Carbon, West Virginia

February 1982

Little Rock Coal Company
Little Rock Mine
Grundy, Virginia

B and C Coal Company, Inc.
B and C Coal Mine
Grundy, Virginia

Energy Coal Corporation, Inc.
No. 10 Central Shop/Warehouse
Paintsville, Kentucky

Energy Coal Corporation, Inc.
No. 11 Mine
Paintsville, Kentucky

Energy Coal Corporation, Inc.
No. 12 Mine
Paintsville, Kentucky

Energy Coal Corporation, Inc.
No. 13 Mine
Paintsville, Kentucky

Energy Coal Corporation, Inc.
No. 14 Mine
Holden, West Virginia

Southern Eagle
Jamestown Mine
Elkins, West Virginia

March 1982

Triton Coal Company
Buckskin Mine
Gillette, Wyoming

WELCOME

NEW MEMBERS

March 1982

Freeman United Coal Mining Company
Crown III Mine
Farmersville, Illinois

High Knob Mining Company
High Knob Mine
Pilgrim Knob, Virginia

Eran Coal Company
Eran Coal Mine
Wolf Summit, West Virginia

Virginia Crews Coal Company
Virginia Crews No. 4 Mine
Iaeger, West Virginia

Mogasco Coal, Inc.
Mogasco Coal Mine
Elkins, West Virginia

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

1981 Injury Data

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For the second straight year, the number of deaths in metal and nonmetal mining was the lowest ever reported. Last year 84 workers were killed at these operations, compared to 103 in 1980. Of the 84 deaths, 42 occurred at metal mines, 14 at nonmetal mines, 19 at stone mines and nine at sand and gravel operations.

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In coal mining, fatalities rose to 155, an increase of 22 deaths over the previous year's total. The rate for fatal coal mining accidents was .07 per 200,000 hours worked.

"These grim figures indicate a need for a renewed commitment to mine safety on the part of everyone--labor, management, and government," said Ford B.Ford, assistant secretary for MSHA. "Reductions in mining injuries will only be possible if we all actively pursue the cooperation required."

The types of coal mining accidents that were responsible for the most deaths last year were falls of the mine roof and ignitions or explosions of gas or dust. Accidents in these categories killed 37 miners each. The second leading cause of death in coal mining was accidents with powered haulage equipment, with 35 fatalities.

Both mining industries achieved considerable reductions in all injuries, with and without lost workdays, in the last calendar year.

The total for all injuries in 1981 at metal and nonmetal mining operations was 14,221, down from 17,468 in the previous year. The rate of injury also declined, from 6.46 per 200,000 employee-hours in 1980 to 5.58 last year.

The drop in injuries in the coal industry was even more substantial, where they declined 22 percent in 1981. The total decreased to 17,802 injuries from 22,723, and the rate declined from 10.03 per 200,000 employee-hours in 1980 to 8.65 last year.

"Although any injury is one too many, we at MSHA are heartened to see this reduction in injuries in the mining industries," said Ford. "This news, combined with the record low number of deaths in metal and nonmetal mining, should give mine operators and miners alike the inspiration they need to continue working together towards safer, healthier mines."

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Doing Something About Safety

When we talk of safety, what comes to mind, something real or something abstract? It would seem that the answer lies in whether or not we are safety-minded. If it represents just a word to one person that person is inclined to be either impractical or negligent. If safety is mentioned to a safe-minded person it immediately presents a picture of some specific protective device or practice.

To a carpenter the picture may be that of flattening protruding nails. To the housewife it may be that of removing scissors from a child's reach. To the machinist it may be that of replacing a guard that has been removed from around belts. To the welder that of wearing eye protection and so on.

Doing something about safety means being constantly aware of hazards and of being alert in preventing accidents. When an accident does occur it is usually the result of unconcern or inattentiveness. One does not walk purposely into a surefire injury--then why do it inadvertently? Why not implant in consciousness the will to remain safe from injury?

The best crafts are created by those who are careful about all details--particularly the detail of safe-practices. We owe it to ourselves, our families, and our employers to stay out of harm's way. Accidents are preventable. The surest way to avoid them is by training oneself to work safely.

ABSTRACT FROM FATAL ACCIDENT

April 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Rail Haulage Accident

General Information: A rewash plant operator was fatally injured when the four loaded railroad cars he was dropping to the yard storage area collided with parked railroad cars. He had 14 years of mining experience, nine years as a rewash plant operator.

The plant, a crushed stone operation, was mined by the multiple bench method. Granite was drilled, blasted and loaded into end dump trucks for haulage to the primary crusher, located on the second bench of the quarry. The stone was crushed and conveyed to the plant for further processing.

Description of Accident: The victim reported for work at his normal starting time and was assigned his regular duty as rewash plant operator. This included dropping railroad cars as the brake person. Cars were loaded out of either the rewash bins or the crusher run bins, then the cars are pushed to the storage area.

Several hours into the shift, a row of four 70-ton hopper cars were spotted under the rewash bins for loading. A water pump for the rewash broke down and these four cars had to be loaded from the stockpiles. The dozer operator stated that he pushed these cars back to the loading ramp of the stockpile area for loading.

After they were loaded, the victim got aboard the front car and hooked up his safety belt and line to the framework at the top of the car, close to the brake wheel. The brakes on the front car were located forward of the car, putting the victim ahead of the loaded cars which were to be pushed to the first switch, about 400 feet. The dozer operator proceeded to push the cars toward the first switch with a Michigan 280 rubber-tired dozer. Once the cars reached the first switch, the dozer stopped, letting the cars freewheel toward the storage area, about 1,684 feet with an approximate grade of 0 to 2 percent. The victim's job, at this point, was to work the brakes gradually to keep the cars under control; however, when the dozer operator turned his vehicle around, he noticed that the car the victim was riding in had derailed and that the victim was injured.

Cause of Accident: It was later determined that the primary cause of the accident was the draw-bar knuckle on the lead car being closed. This caused the cars to meet improperly, to not couple, and to derail.

Contributing causes were the number of cars being dropped at one time and the brake person's inability to control four loaded cars.

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April 1982

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MONTHLY SAFETY TOPIC

Bump Accident

General Information: A bump accident occurred in a pillar block of a coal mine resulting in the death of a continuous mining machine helper. The victim had 12 years of mining experience, including two years as continuous miner helper.

Description of Accident: After repairs were made to the continuous mining machine, mining operations were begun in the pillar and continued until a derailment at the track-loading station caused an interruption. Meanwhile, as the shift continued, the first cut was completed in the pillar and the roof was bolted. When the track repairs were completed, the second cut was started. The continuous miner operator explained that he loaded two shuttle cars of coal from the second cut and then the continuous miner helper began operating the continuous miner. Shortly thereafter, as the helper was loading his second cut of coal, the bump occurred. According to the continuous miner operator, the bump knocked him to the mine floor and the forces from the bump filled the air with dust. He explained that when he regained his balance, he noticed the section supervisor was checking the continuous miner helper, who was trapped in the operator's compartment of the continuous miner. The victim was transported to the hospital where he later died of his injuries.

Conclusion: The mining practices and procedures in the section allowed the pillar to remain full size until the adjacent pillar lines had approached the immediate area before the pillar size was reduced. This practice of splitting pillars in close proximity to a pillar line results in abnormal pressures and subsequent bumps when the coalbed is between a strong roof and floor, such as was the case. Examination of the mine map indicated that there was about 1,485 feet of earth cover, with over 200 feet of massive sandstone roof directly over the coalbed. Further, the mining practices allowed pillar lines to intersect at right angles and allowed large pillars which resisted crushing to stand adjacent to such pillar lines.

April 1982

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Clarification of Standard 55.12-19

In the March Bulletin, Standard 55.12, Electricity, was discussed. Following is a further clarification of Standard 55.12-19, Suitable Clearance Around Stationary Electrical Equipment.

Standard 55.12-19 requires that where access is necessary, suitable clearance shall be provided at stationary electrical equipment or switch gear. The intention of this standard is to provide sufficient access and working space around such electrical equipment to insure worker safety and to avoid contact by persons with electrical components.

The standard is intended to apply to the many and varied situations that do or will exist on mine property. Among the general factors to be considered in determining "suitable clearance" are voltages and conductors (including size), insulation, guards, existing passage or working space, direction of access to electrical components, potential exposure to live or exposed electrical parts, and the grounding of live parts.

The current edition of the National Electrical Code and the National Electrical Safety Code may be used as guidance in determining "suitable clearance." The provisions of the National Electrical Code for safe work clearances around electrical equipment can be found in Article 710 ("Over 600 Volts, Nominal, General"). Part 1 of the National Electrical Safety Code contains two sections that may be of assistance: Section 11 ("Protective Arrangements in Electrical Supply Stations") and Section 12 ("Protective Arrangements of Equipment"). The National Electrical Code may be obtained from the National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts, 02210. The National Electrical Safety Code (also referred to as ANSI-C2) may be obtained from the Institute of Electrical and Electronics Engineers, Inc., National Bureau of Standards, 345 East 47th Street, New York, New York, 10017.

Areas around stationary electrical equipment or switch gear should be restricted to authorized persons. Normal travel by or through such equipment should not be allowed unless no other travelway is available. However, if persons do travel by stationary electrical equipment, Standard 55.11-1 requires that a safe means of access be provided.

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
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Part 55.13--Compressed Air and Boilers

The purpose of these regulations is to promote health and Safety and prevent accidents in open pit metal and non-metal mines. Any failure to comply with these mandatory standards will result in a citation as required by Section 8 of the Act.

55.13--1 All boilers and pressure vessels shall be constructed, installed, and maintained in accordance with the standards and specifications of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.

55.13-2 through 55.13-9 (Reserved)

Compressed Air

55.13-10 (a) Reciprocating type air compressors rated over 10 horsepower shall be equipped with automatic temperature-actuated shutoff mechanisms which shall be set or adjusted to the compressor when the normal operating temperature is exceeded by more than 25 percent.

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55.13-11 Air receiver tanks shall be equipped with one or more automatic pressure-relief valves. The total relieving capacity of the relief valves shall prevent pressure from exceeding the maximum allowable working pressure in a receiver tank by not more than 10 percent. Air receiver tanks also shall be equipped with indicating pressure gages which accurately measure the pressure within the air receiver tanks.

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55.13-15 (a) Compressed-air receivers and other unfired pressure vessels shall be inspected by inspectors holding a valid National Board Commission and in accordance with the applicable chapters of the National Board Inspection Code, a Manual for Boiler and Pressure Vessel Inspectors, 1979. This code is incorporated by reference and made a part of this standard, may be examined at

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(b) Records of inspections shall be kept in accordance with requirements of the National Board Inspection Code, and the records shall be made available to the Secretary or his authorized representative.

55.13-16 (Reserved)

55.13-17 Compressor discharge pipes where carbon build-up may occur shall be cleaned periodically as recommended by the manufacturer, but no less frequently than once every two (2) years.

55.13-18 (Reserved)

55.13-19 Repairs involving the pressure system of compressors, receivers, or compressed-air-powered equipment shall not be attempted until the pressure has been bled off.

55.13-20 At no time shall compressed air be directed toward a person. When compressed air is used, all necessary precautions shall be taken to protect persons from injury.

55.13-21 Except where automatic shutoff valves are used, safety chains or other suitable locking devices shall be used at connections to machines of high-pressure hose lines of 3/4-inch inside diameter or larger, and between high pressure hose lines of 3/4-inch inside diameter or larger, where a connection failure would create a hazard.

55.13-22 through 55.13-29 (Reserved)

Boilers

55.13-30 (a) Fired pressure vessels (boilers) shall be equipped with water level gages, pressure gages, automatic pressure-relief valves, blowdown piping, and other safety devices approved by the American Society of Mechanical Engineers to protect against hazards from overpressure, flameouts, fuel interruptions and low water level, all as required by the appropriate sections, chapters and appendices listed in paragraphs (b) (1) and (2) below.

(b) These gages, devices and piping shall be designed, installed, operated, maintained, repaired, altered, inspected, and tested by inspectors holding a valid National Board Commission and in accordance with the following listed sections, chapters, and appendices:

(1) The ASME Boiler and Pressure Vessel Code, 1977, published by the American Society of Mechanical Engineers.

Section and Title

I Power Boilers.
II Material Specifications--Part A--Ferrous.

II Material Specifications--Part B--Nonferrous.
II Material Specifications--Part C--Welding Rods, Electrodes, and Filler Metals.
IV Heating Boilers.
V Nondestructive Examination.
VI Recommended Rules for Care and Operation of Heating Boilers.
VII Recommended Rules for Care of Power Boilers.

(2) The National Board Inspection Code, a Manual for Boiler and Pressure Vessel Inspectors, 1979, published by the National Board of Boiler and Pressure Vessel Inspectors.

Chapter and Title

I Glossary of Terms.
II Inspection of Boilers and Pressure Vessels.
III Repairs and Alterations to Boiler and Pressure Vessels by Welding.
IV Shop Inspection of Boilers and Pressure Vessels.
V Inservice Inspection of Pressure Vessels by Authorized Owner-User Inspection Agencies.

Appendix and Title

A Safety and Safety Relief Valves.
B Non-ASME Code Boilers and Pressure Vessels.
C Storage of Mild Steel Covered Arc Welding Electrodes.
D-R National Board "R" (Repair) Symbol Stamp.
D-VR National Board "VR" (Repair of Safety and Safety Relief Valve) Symbol Stamp.
D-VR1 Certificate of Authorization for Repair Symbol Stamp for Safety and Safety Relief Valves.
D-VR2 Outline of Basic Elements of Written Quality Control System for Repairers of ASME Safety and Safety Relief Valves.
D-VR3 Nameplate Stamping for "VR".
E Owner-User Inspection Agencies.
F Inspection Forms.

(c) Records of inspections and repairs shall be kept in accordance with the requirements of the ASME Boiler and Pressure Vessel Code and the National Board Inspection Code. The records shall be made available to the Secretary or his authorized representative.

(d) Sections of the ASME Boiler and Pressure Vessel Code, 1977, listed in paragraph (b)(1) above, and chapters and appendices of the National Board Inspection Code, 1979, listed in paragraph (b) (2) above, are incorporated by reference and made a part of this standard. These publications may be obtained from the publishers, the American Society of Mechanical Engineers, 345 East Forty-seventh Street, New York, N.Y. 10017, and the National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, Ohio 43229. The publications may be examined at any Metal and Non-metal Mine Safety and Health District Office of the Mine Safety and Health Administration.

55.13-31 through 55.13-24 (Reserved)

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HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 75--Underground Coal Mines
Subpart E--Combustible Materials and Rock Dusting

Today's discussion is concerned with Part 75.403, maintenance of incombustible content of rock dust. This states that where rock dust is necessary, it shall be distributed upon the top, floor, and sides of all underground areas of a mine and maintained in such quantities that the incombustible content of the combined coal dust, rock dust, and other dust shall be not less than 65 per centum, but the incombustible content in the return air-courses shall be no less than 80 per centum.

Where methane is present in any ventilating current, the per centum of incombustible content of such combined dusts shall be increased 1.0 and 0.4 per centum for each 0.1 per centum of methane where 65 and 80 per centum, respectively, of incombustibles are required.

Compliance with this subsection is determined by chemical analyses of that portion of the collected mine dust that will pass through a No. 20 sieve. Application of the dust shall be by dry methods, except rock dust may be applied wet in the following manner: Wet rock dust shall be limited to rib and roof surfaces in face areas. It shall not be used on the floor or for redusting mine surfaces. In such applications, only limestone or marble dust that meets the specifications contained in Section 318(d) of the Act shall be used; the application shall be at the rate of not less than 3 ounces (weight) of dust per square foot of surface and shall be by a mixture of not more than 6 to 8 gallons of water with 100 pounds of dust, whether by premixed slurry or by mixing at the nozzle of a hose, to assure that the mixture is not too fluid and that sufficient dust adheres to the surfaces. After the wet rock dust dries, additional rock dust shall be applied to all surfaces to meet applicable standards. Wet rock-dusting of ribs and floor does not eliminate the necessity for dry rock-dusting the floor.

To rock-dust effectively, the rock dust must be applied on the top, floor, and sides of all openings. Tests and experience have shown that these incombustible contents are necessary to prevent the dust from entering into an explosion, and the required incombustible content must be maintained on the roof and ribs as well as the floor. A deficiency in inert material in the dust on the ribs (for example) is not compensated by an excess on the floor.

Further, these incombustible contents are, for all practical purposes, minimum standards. They give no assurance that an explosion will never occur; but, they give assurance that, if reasonable care is taken, wide-spread explosions will not develop.

Reasonable care requires that rock-dusting be adequate within 40 feet of the face, that no strong igniting source is present, that coal-dust accumulations have been removed, and that the rock-dust application is not patchy. Fortunately, a factor of safety of another sort does exist. To produce a dust explosion in a coal mine, a particular set of conditions must exist simultaneously. There must be a certain amount of coal dust in suspension, there must be a proper mixture of this dust with the air, and there must be a sufficiently strong source of ignition. These conditions occur simultaneously only on very rare occasions, if this were not the case, there would be a greater possibility for mine explosions.

Safety is Elementary

Most of us respect the laws of society because we recognize their worth. Usually, we even remember, consider, and respect these laws without realizing it too much. They are part of our culture which is learned. We learn not to walk into a strange home unless invited. We learn not to push someone off the sidewalk because we want to pass. We abide by a code to maintain a certain self-respect and dignity.

Safety should be practiced similarly, but in many cases, it is pushed out of our minds and doesn't receive the recognition or respect it deserves. Safety is very real and elementary and embodies the natural laws of self-preservation. A mental restraint can be as protective as an armor plate--if heeded! Warning signals in our minds are just as realistic as sentries on guard--if we believe them! Unfortunately, we don't always heed and believe our better judgment.

It is important that safety consciousness influence our judgments and decisions. Safety is not a theory or a formula, but an elementary part of our consciousness which we must encourage and train to mesh with our everyday activities.

Don't be a Slave to Safety!

Many people can be classified as slaves to safety. The person who grudgingly attends safety meetings, or abides by safety regulations for necessity's sake, is a slave to be pitied.

What does it take to sell one on safety? Just a good, honest self-examination. Analyze those prejudices and critical attitudes. Discard those that can't stand up under careful scrutiny, and substitute some positive, constructive thinking, and the first thing you know, you will find yourself free again! You can find safety to be a way of life instead of a task-master.

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 77--Surface Coal Mines and Surface Work Areas of Underground Coal Mines
Subpart R--Miscellaneous

This discussion concerns the safety standards as they pertain to communications. Webster defines communications as giving or receiving information, signals, or messages by talk, gestures, writing, etc. Good communications between you and another person may help you to prevent an accident. Should an accident occur, your ability to obtain prompt medical assistance may mean the difference between life and death for any worker who may have been injured.

Section 77.1700--Communications in work areas.

No employee shall be assigned, or allowed, or be required to perform work alone in any area where hazardous conditions exist that would endanger his safety unless he can communicate with others, can be heard, or can be seen.

Section 77.1701--Emergency communications; requirements.

(a) Each operator of a surface coal mine shall establish and maintain a communication system from the mine to the nearest point of medical assistance for use in an emergency.

(b) The emergency communication system required to be maintained under paragraph (a) of this section may be established by telephone or radio transmission or by any other means of prompt communication to any facility (for example, the local sheriff, the State highway patrol, or local hospital) which has available the means of communication with the person or persons providing emergency medical assistance or transportation in accordance with the provisions of paragraph (a) of this section.

Section 77.1702--Arrangements for emergency medical assistance and transportation for injured persons; reporting requirements; posting requirements.

(a) Each operator of a surface coal mine shall make arrangements with a licensed physician, medical service, medical clinic, or hospital to provide 24-hour emergency medical assistance for any person injured at the mine.

(b) Each operator shall make arrangements with an ambulance service, or otherwise provide for 24-hour emergency transportation for any person injured at the mine.

Section 77.1702 (a) and (b) "24-hour emergency medical assistance and emergency transportation", does not mean that a physician and ambulance shall be on a standby basis at the mine. It means that these services must be arranged for and be readily available.

(c) Each operator shall, on or before September 30, 1971, report to the Coal Mine Health and Safety District Manager for the district in which the mine is located the name, title and address of the physician, medical service, medical clinic, hospital, or ambulance service with whom arrangements have been made, or otherwise provided, in accordance with the provisions of paragraphs (a) and (b) of this section.

(d) Each operator shall, within 10 days after any change of the arrangements required to be reported under the provisions of this section, report such changes to the Coal Mine Health and Safety District Manager. If such changes involve a substitution of persons, the operator shall provide the name, title, and address of the person substituted together with the name and address of the medical service, medical clinic, hospital, or ambulance service with which such person or persons are associated.

(e) Each operator shall, immediately after making an arrangement required under the provisions of paragraphs (a) and (b) of this section, or immediately after any change, of such agreement, post at appropriate places at the mine the names, titles, addresses, and telephone numbers of all persons or services currently available under such arrangements to provide medical assistance and transportation at the mine.

We Believe

...THAT everyone bears the unalterable responsibility for keeping out of harm's way. We all owe this to ourselves, our families, our co-workers, and our employers.

..THAT no one lives or works entirely alone. We are all involved with each other, touched by the accomplishments of others, and marked by their failures. If we fail the person beside us, we fail ourself, and everyone will share the burden of that loss. When an accident occurs, not only has someone failed; but that person's co-workers have also failed in their duties.

...THAT accidents are conceived in improper attitudes, and born in moments of action without thought. They will cease to be only when the proper attitude is strong enough to precede the act--when the right attitude creates the awareness that controls the act.

...THAT the prevention of accidents is an objective which crosses all levels of rank, organization and procedure.

...THAT freedom from harm is not a privilege but a goal to be achieved and perpetuated day by day.

...THAT the elimination of injury and pain through accidents is a moral and human obligation upon which the final measure of our performance directly depends.

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Roof Fall Problem

The greatest danger in coal mining is, and always has been, coal or rock falling from the roof, rib, or face. Year after year, falling materials injure and kill far more miners than do mine fires, explosions, and flooding. Roof fall fatalities to date have more than doubled over the same corresponding period in 1981.

Everyone knows that blasting, electricity, or a fast-moving trip can be dangerous, but all these hazards have not produced as many deaths as have roof fall injuries. One-half or more of all miners killed in underground coal mines met with death from a fall of roof, face, or rib.

Roof falls have no respect for anyone who works underground, whether it be a mine owner, superintendent, section boss, the first shift of a new miner, or even an old timer. Experience won't keep the roof off anyone's back. Mine supervisors and miners with several years of experience are being injured and killed. The average experience of miners killed by a fall of roof is about 22 years.

We must profit from the mistakes that have caused the most frequent and serious injuries in the past. These mistakes always involved disregarding one or more of the three "T's" for self-protection from loose roof, namely, Testing the roof; Taking down loose roof; or Timbering weak roof.

Experience has proven that failure to test the roof by sight, hearing, and by touch has been a major factor in numerous roof fall injuries. In many cases, a casual visual examination was not enough to prevent an injury.

Probably the worst mistake being made, especially by experienced miners, is attempting to "out guess" roof which is known to be loose. In numerous reported injuries, taking down or supporting the loose area was postponed on the assumption that the roof would hold a few minutes longer, until some small task was done. Our eyes, ears, and sense of touch can only tell us where the roof may be tight or loose, not how long it will stay in place.

Systematic supports will eliminate numerous misjudgments of roof conditions. Unfortunately, the safety effectiveness of standard support methods is not fully appreciated. At least one-half of the fatalities from roof fall injuries has been traced to the failure of not following standard roof-control plans.

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Temporary Repairs

There is an old saying that goes, "You can get used to hanging if you hang long enough." This adage is appropriate to explain how temporary, makeshift repairs become so tolerated that the tendency is to forget them, unless some unusual circumstance causes other action.

Makeshift repairs give apparent temporary relief; they are like painting over rusty spots in a steel structure without first wirebrushing the rust. With such practice, the paint does not prevent the spread of corrosion; it only has the appearance of doing some good.

It is not unusual in coal mines to have repairs become permanent that were originally intended to be temporary. Conditions arise in coal-mine operation requiring temporary repairs, but these should be corrected at the first opportunity.

Temporary or makeshift repairs are made in connection with electrical machinery and appurtenances probably more than any other group classification in a mine. These makeshift repairs have been the cause of numerous mine fires and explosions.

Not only from the safety standpoint, but also from the economy angle, makeshift repairs are poor investments. In many instances, the cost of the labor for doing a repair job far exceeds the material cost. A good permanent repair job may cost little, if any more, in the aggregate than a poor temporary one. At the same time it may eliminate danger to the miners.

Safety Attitude

Keeping safe is often a matter of keeping cool or keeping the mind on the job. Or in other words--keeping a proper attitude.

There are various states of mind that detract from a state of safety. Notorious among these are anger and absentmindedness. The latter might stem from daydreaming or worry.

At work there is only one place to focus one's thoughts and that is on the job. Safety does not allow for emotional upheavals or mental lapses.

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Safety is Everyone's Business

There is no excuse for an accident - only a reason!

History tells us that the first electrocution by man-made electricity occurred in 1879 when a stagehand got tangled in wires to arc lights. Since then acres of graveyards have been planted with thousands of people who, due to thoughtlessness, carelessness or ignorance, allowed their bodies to become part of an electrical circuit.

There are rules governing all human conduct. The first written rules, the Ten Commandments, are still on the books. They have not been amended or repealed. Mother Nature does not ignore her laws. No one needs a college degree in physics or engineering to understand the natural laws of gravity, inertia, centrifugal force. It is not "unlucky" to walk under a ladder, it is just plain common sense to avoid being struck by a falling object - the law of gravity. A sleepy mother gets up in a darkened room to answer her baby's cry and bumps into a door - the law of inertia. A speeding car turns off a curve, hits an electric pole - the combined laws of centrifugal force and inertia.

Safety is so simple and easy when you THINK about it. Guard against the hazard and the accident is prevented. The regrettable thing about any accident is not only the injury to personnel or the damage to property, but the fact that a condition existed that permitted it to occur.

Safety rules are compiled from the histories of many thousands of accidents which have happened over many years. Hindsight can explain what foresight should have prevented. The reason history repeats itself is that so many of us did not listen or hear the first time. Some people learn from experience; others never recover.

The foreword of any company rule book should read: "It is the definite responsibility of every employee while on the job, to provide: (1) Safety to her/himself, (2) Safety to co-workers, (3) Safety to the public, (4) Safety to company property."

Your company has rules, too. Are you following and observing the rules? All the time? Most of the time? Sometimes? When it is convenient?

An accident is a reflection upon the intelligence of an individual, a department, a company. Each individual is writing the history of the company. It should be written with safety as a guideline. Then after each job that person can think with pride, "This was a good job, performed safely. And I helped to do it."

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Sell Safety

Unfortunately, safety seldom enjoys the advantage of a buyer's market. It must always be sold. The accident prevention program is designed to sell the product, much like a parent may sell a dose of medicine to a child--doctored up to disguise the smell and taste.

While safety is hardly the same as an unpleasant medicine, the reaction of some people to it at times appears to give it that quality. The realistic safety program tries to make the subject interesting and palatable--thus opening deaf ears that ordinarily do not hear, and eyes that do not see,to the importance of safety as it respects the individual.

No accident prevention program will succeed unless its leaders are aware of the basic fault or quirk of human nature which sets up mental road blocks that will not permit a safety message getting through. Give someone a compliment or some good news--often it will be heard even if you whisper; but, try to impress the importance of safety and you may have to shout. The effective safety program does both. It whispers to some and shouts to others.

Safety is a product of civilization. It is not inherent at birth. It is not something people automatically accept as applicable to them, nor is it something that can be legislated into being by law. People must be led into a safer way of life. There is no such law as the law of self-preservation. Anyone who doubts that statement may confirm its truth by reading tomorrow's headlines. It may be further confirmed by driving a car without regard to the actions of other drivers. A rude awakening may await those who do not take the trouble to drive defensively.

A safe individual is the product of constructive leadership--leadership that is positive in its approach to safety, not only in words but in deeds.

Safety is best sold by one individual to another individual. It needs to have every individual in the plant on the safety team to be truly effective.

Good Example

Anyone who believes in safety will set a good example. Demonstrating safe work methods and pointing out the hazards to new miners is an attribute of a safety-minded employee.

Wearing a hard hat during work hours is a simple way to illustrate a belief in one of the elementary principles of safety. Wearing other protective apparel when the need is indicated sets an example which is easy for others to follow. Be a good example, for your own sake and for others.

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Vacation Safety

For outdoor fires, select a site clear of bushes or low overhang. Restrict the fire to a small area and keep it under control. Don't toss chemicals or aerosol cans into a fire. When leaving, make sure it is thoroughly stamped out or drenched with water. Be sure burning matches, cigarette butts and tobacco are extinguished before discarding them.

Before diving into strange water, get to know something about what's beneath the surface. Avoid swimming alone, beyond your depth, too great a distance, or in darkness.

Watch out for poison ivy and other such weeds and be alert for children eating strange berries. They could be poisonous.

Start out knowing your car is safe for the road. Avoid overcrowding. Drive in easy stages and at moderate speed. Be alert for traffic signs and defective conditions of road and other drivers.

Avoid drinking water at roadside springs. If doubtful as to the purity of water, boil it.

Make sure your boat is in good shape. Don't overload it and see that everyone is seated and provided with a life preserver. See that children don't lean over the side. Don't show off or turn a bathing area into a speed boat course.

Stay out of water and boats during a lightning storm. Avoid sheltering under a tree as lightning usually strikes the tallest object. Be careful on the golf course, a metal club could become a lightning rod.

Sound Familiar?

In the course of accident investigations, how often have you heard this said: "I don't know how it could have happened--he was one of the most careful people I ever worked with!"

If that is true of those who are careful, then what of those who are lukewarm regarding safety and accident prevention?

HOLMES SAFETY ASSOCIATION

WE NEED YOU

TO VOLUNTEER

IF YOU ARE RETIRED, OR WORKING, AND HAVE SOME EXTRA TIME TO SPARE, MSHA AND THE HSA NEED YOUR EXPERIENCE. WE HAVE MANY INTERESTING PROGRAMS THAT WOULD APPRECIATE YOUR HELP.

FOR FURTHER INFORMATION, CALL OR WRITE TO:

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649 or 650
FTS/721-8649 or 8650

LET'S ALL PULL TOGETHER!

April 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

HOLMES SAFETY ASSOCIATION

INSIGHTS

SUPERVISOR'S SELF-EXAMINATION

Do you ever take time for meditation? A bit of inward searching now and then may help you to find ways of improving your relationships with people --and to do a much better job as a supervisor--if you'll question yourself sincerely.

To help you probe the critical areas--and to provide food for thought--here's checklist FOR YOURSELF ALONE. You don't even need to write down your answers--but you should answer honestly, in your mind, and then take a good look at your score. How do you stack up?

	Yes	No
Do I practice what I preach about safety?............	___	___
Do I know all the hazards in my department?..........	___	___
Do I inspect continuously for hazards?...............	___	___
Do I permit unsafe shortcuts by workers?.............	___	___
Do I check on their personal protection?.............	___	___
Do I stop unsafe practices without delay?............	___	___
Do I criticize in friendly, helpful manner?..........	___	___
Do I see that workers have proper tools?.............	___	___
Do I make sure tools are in good condition?..........	___	___
Do I insist on prompt first aid for injuries?........	___	___
Do I encourage reports on unsafe conditions?.........	___	___
Do I investigate accidents promptly, **fully**?..........	___	___
Do I encourage housekeeping for safety?..............	___	___
Do I encourage safety suggestions?...................	___	___
Do I act promptly on all suggestions?................	___	___
Do I give proper credit for good suggestions?........	___	___
Do I help workers feel secure in their jobs?.........	___	___
Do I commend good work whenever possible?............	___	___
Do I try to counsel worried employees?...............	___	___
Am I considerate in handling grievances?.............	___	___
Am I a good listener?................................	___	___
Do I administer discipline fairly?...................	___	___
Do I keep emotion out of job decisions?..............	___	___
Do I prepare for opportunities ahead?................	___	___
Am I training others to take over my job?............	___	___
Do I consider my own health and safety?..............	___	___

HURRY....HURRY....... HURRY!

NATIONAL COUNCIL NEWS BRIEF

ANNUAL MEETING OF THE HOLMES SAFETY ASSN., WILL BE HELD AT QUALITY INN/CENTRAL, 1190 COURTHOUSE ROAD, ARLINGTON, VA. 22201 TUESDAY, MAY 25, 1982, 10:am

LODGING. FOOD. DRINKS. MEETING ROOM ALL AT ONE LOCATION 4 BLOCKS FROM SUBWAY.

THE J.A.H.S.A. WILL MEET SAME TIME AND PLACE THE NEXT DAY.

Everyone is invited. For further information contact Holmes Safety Association office, 4800 Forbes Avenue, Room A-273, Pittsburgh, Pennsylvania 15213. (412) 621-4500 extension 649 or 650

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HOLMES SAFETY ASSOCIATION MEETING REPORT FORM

For the month of ______________

TOTAL meetings held this month __________

TOTAL attendance this month _____________

Chapter Number _________ (See address label, if incorrect, please indicate change.)

____
(Signature)

____
(Telephone No.)

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(Title)

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HOLMES SAFETY ASSOCIATION
SAFETY EFFICIENCY
MINERAL INDUSTRIES

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

in this
issue....

May 1982

1. Safety Topic, "Welcome New Members"
2. Safety Topic, "Newsletter/Housekeeping"
3. Safety Topic, "How Are Your Safety Meetings?"
4. Safety Topic, "Safety Tips"
5. Safety Topic, "Part 55.14--Use of Equipment"
6. Safety Topic, "Part 75--Subpart F--Electrical Equipment"
7. Safety Topic, "Handling Explosives and Detonators"
8. Safety Topic, "Number 1 Killer on Rampage/Roof Control Practices Need Improvement"
9. Safety Topic, "Do It Yourself/Preventing Personal Injury"
10. Safety Topic, "Part 77--Subpart R--Miscellaneous"
11. Coal Mine Fatalities/January-December 1981
12. Safety Topic, "Repetition of Supervisor Fatalities"
13. Abstract, "Electrical Accident"
14. Abstract, "Fall-of-Back Accident"
15. Safety Topic, "Vacation With Safety"
16. Hurry.....Hurry.....Hurry.....Annual Meeting
17. The Last Word
18. Meeting Report Form (chapters only)

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WELCOME

NEW MEMBERS

April 1982

Trace Fork Coal Company
Trace Fork 5-A Mine
Premier, West Virginia

Trace Fork Coal Company
Trace Fork 8 Mine
Premier, West Virginia

Trace Fork Coal Company
Trace Fork Banacek Mine
Premier, West Virginia

Leslie Coal Company
Leslie Mine
Premier, West Virginia

Royalty Smokeless Coal Company
Royalty Plant
Premier West Virginia

Terry Eagle Coal Company
Christopher No. 1 Mine
Summersville, West Virginia

Terry Eagle Coal Company
Bald Eagle No. 1 Mine
Summersville, West Virginia

Terry Eagle Coal Company
Cari Eagle No. 1 Mine
Summersville, West Virginia

Terry Eagle Coal Company
Warren Eagle No. 2 Mine
Summersville, West Virginia

Terry Eagle Coal Company
Robert Eagle No. 2 Mine
Summersville, West Virginia

Terry Eagle Coal Company
Robert Eagle No. 3 Mine
Summersville, West Virginia

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

NEWSLETTER

CLEAN UP
DON'T SLIP UP

Good Housekeeping isn't sissy —
—it's just plain smart!

Housekeeping

There is a definite relationship between the number of accidents in an area and the housekeeping conditions. This being the case, let's consider a fundamental rule in safe housekeeping; a place for everything and everything in its place. In other words, good housekeeping means cleanliness, order and safety.

Dirt is merely matter out of place. The oil and grease that is everywhere but where it is supposed to be is a hazard. Oil and grease on floors, on tools, and on equipment is an invitation to slips, falls, and the possibility of fires.

Watch where you lay your tools and materials. Never put them on a moving machine or on a machine frame. Keep them off ladders, stairs or ledges. Don't lay things on top of anything people are working under.

ELIMINATE A HAZARD-
PREVENT AN ACCIDENT

Keep Floors CLEAN for SAFETY!
ANYBODY OUGHTA KNOW THAT!

Keep spaces under benches and stairways, in storage areas, around stoves and around machines free of refuse and junk. Stock storage, whether indoors or outdoors, must be neat and orderly with no unsafe piles or edges sticking out. Keep exits, walkways, and first aid and fire equipment clear of obstructions.

WHY SHOULD I PICK IT UP? I DIDN'T PUT IT THERE
LATEST DOPE!

"How can we keep our work area and tools clean and orderly?" It's just a matter of a little attention on the part of each of us. Clean up and pick up after every job or before the end of your shift. Leave your space or equipment in such a condition that injury or fire will not be caused as a result of you not cleaning up.

You spend a good share of your life in your working place. The condition of that working place has an effect on how you feel about your job. Good housekeeping helps to build a better outlook on your job and life itself.

CLEANUP TIME
is ALL THE TIME

A MESSY FLOOR
MEANS FALLS GALORE

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

How Are Your Safety Meetings?

In a recent survey on the subject, participants were asked what they considered to be the greatest weakness observed in this kind of meeting.

The number and nature of responses to this question constitutes a veritable blueprint on how not to conduct a safety meeting.

The weaknesses most often mentioned were:

1. Nothing accomplished (no results, no communication back to employees, items drag on and on)
2. Poor planning
3. Poorly led
4. Not a constructive climate
5. Poor participation, (poor attendance, people don't want to be on committees, no discussion, no constructive ideas from group)
6. Boring
7. Get off track
8. Gripe session
9. More like maintenance meetings
10. No follow up
11. 90 percent of time discussing 10 percent of accident causes

Many respondents felt that safety meetings could be a useful tool if they were made to work better. The safety director is the logical one to accomplish this purpose. Think about it. Could your safety meetings profit from more time and thought put into them?

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

SAFETY TIPS

Check Them Six Ways

Once a famous lawyer was asked how he repeatedly won favorable verdicts, and the attorney replied: "Well, I always make my juries understand the case. First, I tell them what I am going to tell them. Second, I tell them. Then, over and over again, I tell them what I told them.

According to successful supervisors in industry, it's about the same in training workers to perform efficiently and safely. But just telling them is not enough. You must show them.

The supervisor who alibis with "I told him" or "She didn't ask me how to do it" is in a tight spot. Someone disobeyed the rules or did not know the rules and received an injury.

But suppose you do tell your employees. Suppose someone gets hurt anyway and you have to explain why. If all you did was instruct, this might not have been enough.

When you want a worker to do a job your way, the safe way, don't just tell the employee. You must show him or her the correct way, explain why it is the safest way and let the employee try it. Watch the employee and check up to make sure the safe way is being consistently followed. There is more to training than just conversation.

The supervisor who knows how to train employees will never have to back into a corner and desperately try to stave off the facts with "I told him."

****

Remember, it is the simple things in life that count. It may be that small item of carelessness that will harm you.

Safety must be a habit! Sure we're rushed and the day is long and the work can become frustrating. But stop a minute every so often in the heat of work . . . THINK . . . and when all else fails . . . Use Your Head.

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
Subchapter N--Metal and Nonmetallic
Open-Pit Mines
Part 55.14--Use of equipment

Today's discussion covers the mandatory standards contained in The Code of Federal Regulations, Section 55.14 "Use of equipment" in open pit mines. These regulations are for the promotion of health and safety, and the prevention of accidents in each mine subject to the Act. Any violation of these standards will result in the mine operator being cited under section 8 of the Act.

Guards

55.14-1 Gears; sprockets; chains; drive, head, tail, and takeup pulleys; flywheels; couplings; shafts; sawblades; fan inlets; and similar exposed moving machine parts which may be contacted by persons, and which may cause injury to persons, shall be guarded.

55.14-2 Overhead belts shall be guarded if the whipping action from a broken belt would be hazardous to persons below.

55.14-3 Guards at conveyor-drive, conveyor-head, and conveyor-tail pulleys shall extend a distance sufficient to prevent a person from accidentally reaching behind the guard and becoming caught between the belt and the pulley.

55.14-4 and 55.14-5 (reserved)

55.14-6 Except when testing the machinery, guards shall be securely in place while machinery is being operated.

55.14-7 Guards shall be of substantial construction and properly maintained.

55.14-8 Stationary grinding machines other than special bit grinders shall be equipped with:

(a) Peripheral hoods (less than 90 degree throat openings) capable of withstanding the force of a bursting wheel;
(b) Adjustable tool rests set as close as practical to the wheel;
(c) Safety washers.

55.14-9 Grinding wheels shall be operated within the specifications of the manufacturer of the wheel.

55.14-10 Hand-held power tools, other than rock drills, shall be equipped with controls requiring constant hand or finger pressure to operate the tools or shall be equipped with friction or other equivalent safety devices.

55.14-11 Guards, shields, or other suitable protection shall be provided in areas where flying or falling materials present a hazard to personnel.

55.14-12 (reserved)

55.14-13 Fork-lift trucks, front-end loaders, and bulldozers shall be provided with substantial canopies when necessary to protect the operator.

55.14-14 Face shields or goggles, in good condition, shall be worn when operating a grinding wheel.

55.14-15 through 55.14-24 (reserved)

Methods and Procedures

55.14-25 (reserved)

55.14-26 Unsafe equipment or machinery shall be removed from service immediately.

55.14-27 Operation of machinery or equipment shall be assigned only to competent persons.

55.14-28 (reserved)

55.14-29 Repairs or maintenance shall not be performed on machinery until the power is off and the machinery is blocked against motion, except where machinery motion is necessary to make adjustments.

55.14-30 Persons shall not work on or from a piece of mobile equipment in a raised position until it has been blocked in place securely. This does not preclude the use of equipment specifically designed as elevated mobile work platforms.

55.14-31 Drive belts shall not be shifted while in motion unless the machines are provided with mechanical shifters.

55.14-32 Belts, chains, and ropes shall not be guided onto power-driven moving pulleys, sprockets, or drums with the hands except on slow moving equipment especially designed for hand feeding.

55.14-33 Pulleys of conveyors shall not be cleaned manually while the conveyor is in motion.

55.14-34 Belt dressing shall not be applied manually while belts are in motion unless an aerosol-type dressing is used.

55.14-35 Machinery shall not be lubricated while in motion where a hazard exists, unless equipped with extended fittings or cups.

55.14-36 Tools and equipment shall not be used beyond the design capacity intended by the manufacturer, where such use may create a hazard to personnel.

55.14-37 through 55.14-44 (reserved)

55.14-45 Welding operations shall be shielded and well-ventilated.

55.14-46 through 55.14-54 (reserved)

Clarification of 55.14-3

Mandatory standard 55.14-3 requires that the guards at conveyor-drive, conveyor-head, and conveyor-tail pulleys shall extend a distance sufficient to prevent a person from accidentally reaching behind the guard and becoming caught between the belt and the pulley. This standard is to be cited when there is a guard at such locations, but it does not extend a distance sufficient to prevent persons from accidentally reaching behind the guard and becoming caught.

This standard is to be distinguished from standard 55.14-1 which requires guarding of certain moving machine parts (such as drive, head, tail and takeup pulleys) which may be contacted by, and cause injury to, persons. Standard 55.14-1 is to be cited in those instances when there is no guard at the conveyor-drive, conveyor-head, or conveyor-tail pulleys.

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 75--Underground Coal Mines
Subpart F--Electrical Equipment

Today's discussion is concerned with Part 75.500, permissible electric equipment. This standard states: (a) All junction or distribution boxes used for making multiple power connections inby the last open crosscut shall be permissible; (b) All handheld electric drills, blower and exhaust fans, electric pumps, and such other low horsepower electric face equipment as the Secretary may designate on or before May 30, 1970, which are taken into or used inby the last open crosscut of any coal mine shall be permissible; (c) All electric face equipment which is taken into or used inby the last open crosscut of any coal mine classified under any provision of law as gassy prior to March 30, 1970, shall be permissible; and (d) All other electric face equipment which is taken into or used inby the last crosscut of any coal mine, except a coal mine referred to in Section 75.501, which has not been classified as a gassy mine prior to March 30, 1970, shall be permissible.

Part 75.500-1 concerns other low horsepower electric face equipment. Other low horsepower electric face equipment designated pursuant to the provisions of Section 75.500(b) is all other electric-driven mine equipment, except low horsepower rock dusting equipment, and employs an electric current supplied by either a power conductor or battery and consumes not more than 2,250 watts of electricity and which is taken into or used inby the last open crosscut.

May 1982

"SAFETY"
It's Up to You,
In '82

MSHA

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Handling Explosives and Detonators

Don't hesitate to take a second look and size up our work habits and attitudes regarding each job that has built-in hazards like blasting. All of us are not shot firers ; however, we should be familiar with the safe practices involved in handling explosives.

We know that explosives have a terrific force, but are we aware that there is a tendency to develop careless habits that could lead to tragic results? Have any of you ever wondered just how powerful explosives are compared with your own strength? Roughly, a cubic inch of powder has the potential energy to lift 1,000 pounds to a height of 1 foot. And the electrical blasting caps we use are extremely sensitive to electrical current or shock. Generally, an electrical current is used to heat the wire bridge in the blasting cap like the filament in a lamp, which in turn starts a chain of charges leading to a blast sufficient to initiate the detonation of a primer cartridge. A couple of good flashlight batteries can supply the electrical current needed to detonate a blasting cap, so we must keep strict control over these helpers which provide a combination of brute strength and a quick temper.

Keeping control is no secret. We must protect powder and caps from the dangers of falls of roof or ribs and isolate them from electricity or stray currents. For this we have special magazines, built substantially and with nonconductive material, to keep them enclosed and separated. Place the magazines in an area free from travel of equipment and sufficiently away from power conductors. Magazines are to be used only for the separate storage of the magazines so we can easily arrange to make our old stock accessible for use first. Empty cases should be taken from the mine and destroyed on the surface.

When explosives and detonators are needed they are to be carried separately in specially built nonconductive containers. Be sure the containers are closed to prevent loss of an item that could become an instant booby trap. Explosives and detonators should be kept separate at all times until used. At the end of the shift, all unused explosives and detonators should be returned and enclosed in their respective magazines.

We must handle explosives and detonators carefully at all times and protect them from fire, flame, or sparks and keep them from contact with electrical currents or charged surfaces.

Remember, a wrong move in the handling of explosives could be your last move. In this situation, it's not like having a tiger by the tail--the tiger has you.

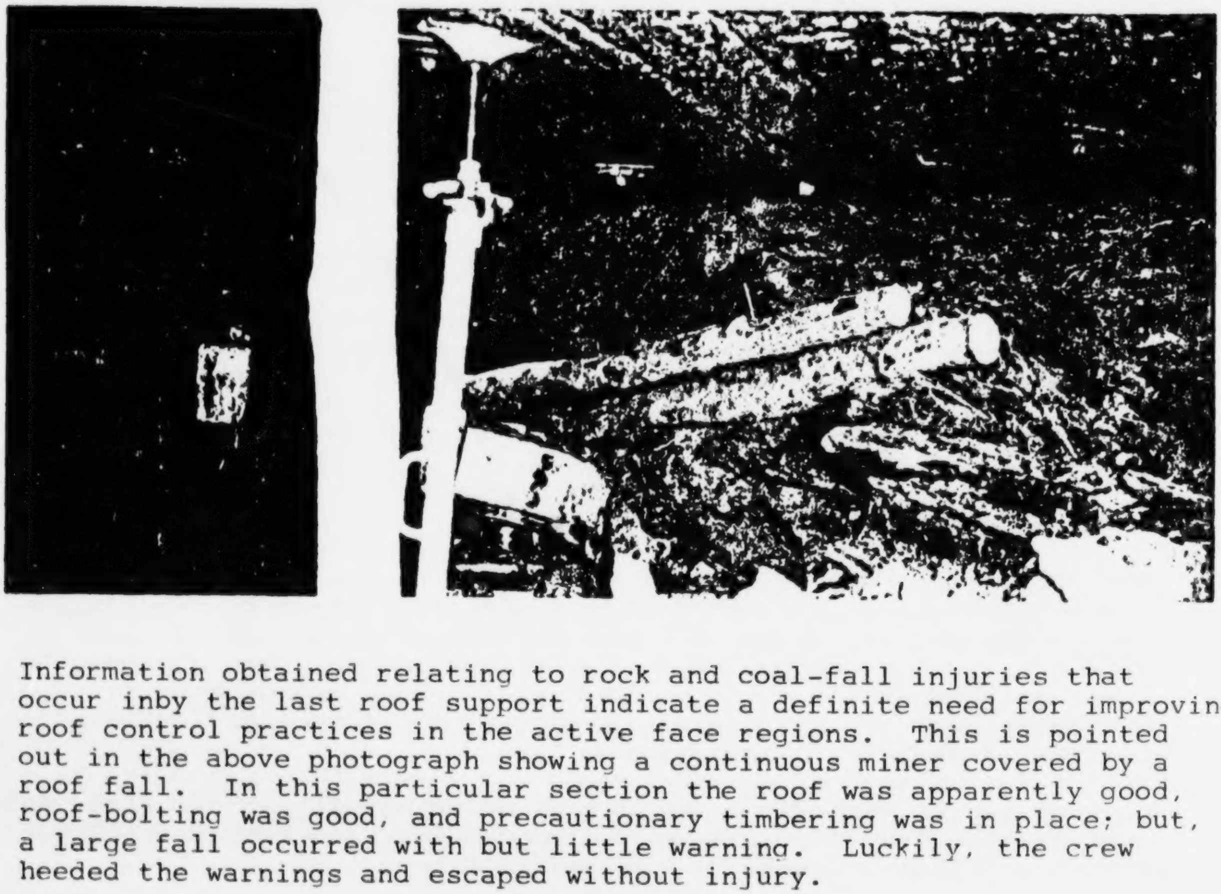
May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

No. 1 Killer on Rampage

TYPE OF ACCIDENT	3/31	UNDERGROUND	
		1981	1982
ROOF FALL		9	18

Roof Control Practices Need Improvement



Information obtained relating to rock and coal-fall injuries that occur inby the last roof support indicate a definite need for improving roof control practices in the active face regions. This is pointed out in the above photograph showing a continuous miner covered by a roof fall. In this particular section the roof was apparently good, roof-bolting was good, and precautionary timbering was in place; but, a large fall occurred with but little warning. Luckily, the crew heeded the warnings and escaped without injury.

Consistently, the job classifications that have the highest rate of injuries in the face area are those which require persons to work in the border area at some time during their cycle of operation. This border area is along the last line of protection provided by the permanent roof supports. These job classifications are loading machine and continuous miner operators, roof bolters, and timbersetters. Normally, coal-drilling, face-haulage crews, and mechanics do not advance beyond permanent roof supports after the coal face is mined and the newly exposed roof begins to sag.

In this border area, the best protection is obtained from a thorough examination and tests of the roof, face, and ribs, careful use of temporary roof supports, and scaling as needed. Some operators of face equipment have a tendency to think, "Well, the roof looks good, and surely the last post or row of bolts will protect me if I go a foot or so inby, and I'll only be there a fraction of a minute or a couple of minutes at the most."

This is dangerous thinking and, sooner or later, will result in an injury. Most miners know, or should know, the rules. The rules should be obeyed.

Do it Yourself

No one person or thing is more responsible for preventing personal injury than the individual miner.

To avoid accidents employees must have their own built-in safety inspection system. A mine can have the most complete and comprehensive safety rules written. The most foolproof type safety guards available can be installed around each piece of moving machinery. Protective clothing and equipment of all types can be at the employee's elbow just waiting to be used. However, without the right attitude, none of this will prevent accidents.

Safety rules are useless unless they are obeyed and enforced.

Safety guards are no longer safety guards when they are not put back in place after repairs or adjustments.

Protective clothing and equipment when not worn or used as it should be is not fulfilling its purpose.

Each miner, if properly trained, knows his/her own job better than anyone else. Miners should also know every hazard to which he/she is exposed in performing the job and be able to perform it in the safe and proper method. This minimizes the chance for injury. If an employee is unsure of the safe method, it is proper to insist that the supervisor provide that employee with additional job safety training.

It is impossible to write a safety rule for every possible hazard which may develop in the performance of one's job. It is also impossible to provide 100 percent supervision to safeguard everyone; however, with the right mental attitude and a good measure of common sense, most accidents can be avoided.

You must accept the fact that unseen hazards do exist and that you are not immune to injury.

Remember--You are your best safety supervisor.

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 77--Surface Coal Mines and Surface Work Areas of Underground Coal Mines
Subpart R--Miscellaneous

Today's discussion concerns the safety standards as they apply to first aid training and first aid equipment. What would you do if a coworker or family member were suddenly injured or became ill? Promptly after an accident or illness occurs and before medical help can take over there is a critical period in which a person skilled in first aid techniques can mean the difference between life and death for the victim. First aid does not replace the physician but it does attempt to keep the injured or ill person alive and in the best condition possible until medical aid arrives.

Section 77.1703--First aid training; supervisory employees.

On or before September 30, 1971, each operator of a surface coal mine shall conduct a first aid training course for selected supervisory employees at the mine, and report in writing to the District Manager the names and job titles of all supervisory employees so trained. Thereafter, each operator shall, within 60 days after the selection of a new supervisory employee to be trained, report in writing to the Coal Mine Health and Safety District Manager the name and job title of such employee and the date on which such employee satisfactorily completed the first aid training course.

Section 77.1704--First aid training program; availability of instruction to all miners.

On or before December 30, 1971, each operator of a surface coal mine shall make available to all miners employed in the mine a course of instruction in first aid conducted by the operator or under the auspices of the operator, and such a course of instruction shall be made available to newly employed miners within 6 months after the date of employment.

Section 77.1705--First aid training programs; retraining of supervisory employees: availability to all miners.

Beginning January 1, 1972, each operator of a surface coal mine shall conduct refresher first aid training programs each calendar year for all selected supervisory employees and make available refresher first aid training courses to all miners employed at the mine.

Section 77.1706--First aid training program; minimum requirements.

(a) All first aid training programs required under the provisions of Sections 77.1703 and 77.1704 shall include 10 class hours of training in a course of instruction similar to that outlined in "First Aid, A Bureau of Mines Instruction Manual."

(b) Refresher first aid training programs required under the provisions of Section 77.1705 shall include 5 class hours of refresher training in a course of instruction similar to that outlined in "First Aid, a Bureau of Mines Instruction Manual."

Section 77.1707--First aid equipment; location; minimum requirements.

(a) Each operator of a surface coal mine shall maintain a supply of the first aid equipment set forth in paragraph (b) of this section at or near each working place where coal is being mined, at each preparation plant and at shops and other surface installations where ten or more persons are regularly employed.

(b) The first aid equipment required to be maintained under the provisions of paragraph (a) of this section shall include at least the following:

(1) One stretcher;
(2) One broken-back board (if a splint-stretcher combination is used it will satisfy the requirements of both subparagraph (1) of this paragraph and this subparagraph (2);
(3) Twenty-four triangular bandages (15 if a splint-stretcher combination is used);
(4) Eight 4-inch bandage compresses;
(5) Eight 2-inch bandage compresses;
(6) Twelve 1-inch adhesive compresses;
(7) An approved burn remedy;
(8) Two cloth blankets;
(9) One rubber blanket or equivalent substitute;
(10) Two tourniquets;
(11) One 1-ounce bottle of aromatic spirits of ammonia or 1 dozen ammonia ampules; and,
(12) The necessary complements of arm and leg splints or two each inflatable plastic arm and leg splints.

(c) All first aid supplies required to be maintained under the provisions of paragraphs (a) and (b) of this section shall be stored in suitable, sanitary, dust tight, moisture proof containers and such supplies shall be accessible to the miners.

Coal Mine Fatalities
January-December 1981

U.S. Department of Labor
Mine Safety and Health Administration

Raymond J. Donovan, Secretary

Ford B. Ford
Assistant Secretary
for Mine Safety and Health

Coal Mine Fatalities for 1981: **153**

December Fatalities: 35

UNDERGROUND: Roof Fall 5, Haulage 3, Machinery 2, Other 21

SURFACE: Haulage 3, Machinery 1

(Compared with 1980: 133)

Coal Mine Fatalities for Jan-Dec 1981 and Jan-Dec 1980 by State:

	1981	1980
Kentucky	41	29
West Virginia	28	34
Colorado	21	2
Virginia	17	15
Tennessee	15	4
Pennsylvania (Bit.)	14	14
Alabama	4	3
Utah	3	0
Wyoming	3	2
Missouri	2	0
Ohio	2	8
Pennsylvania (Anth.)	2	3
Indiana	1	3
Illinois	0	15
New Mexico	0	1

Fatalities for Jan-Dec 1981 by Occupation. Location and Cause:

OCCUPATION

Supervisor	23
Roof Bolter/Helper	22
Continuous Miner Operator/Helper	14
Truck Driver	10
Laborer	10
Shuttle Car Operator	8
Scoop Operator	8
Mechanic Helper	7
Electrician Helper	6
Belt Man/Conveyor Man	4
Drill Operator/Helper	4
Miner Helper (Trainee)	3
Front End Loader Operator	3
Brattice Man	3
Loading Machine Operator/Helper	3
Welder	2
Motorman	2
Jack Setter	2
Timberman	2
Utility Man	2
Shotfirer	2
Superintendent	2
Supply Man	1
Bulldozer Operator	1
Maintenace Man	1
Stripping Shovel Operator	1
Rockman	1
Pumper	1
Car Dropper	1
Cutting Machine Operator	1
Loading Shovel Operator/Oiler	1
Unknown	2

LOCATION

Underground Mine	112
Strip and Auger Mine	26
Surface Area of UG Mine	9
Preparation Plant	6

CAUSE

Roof and Rib Fall	41
Haulage	35
Machinery	13
Electrical	11
Other	53

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

REPETITION OF SUPERVISOR FATALITIES ?

YEAR	1977	1978	1979	1980	1981
TOTAL	139	106	144	133	155
SUPV.	24	11	23	22	25
%	17%	10%	16%	17%	16%

It has been estimated that 93 percent of all coal-mine accidents are preventable, and only 17 percent are chargeable to the inherent hazards of the industry. Almost invariably low injury rates are experienced at those mines where a continuous effort is made to find and solve the basic causes of accidents.

The attitude of employees and supervisors, with respect to observing safe working practices, is most important in accident prevention. A hazardous job can be accomplished with reasonable safety by giving proper thought to the hazards involved and providing the necessary protection. On the other hand, carelessness in performing relatively safe tasks will likely result in injuries.

Reckless employees are a reflection on the effectiveness of management--either they should never have been hired, or they could have been fired before serious accidents occurred. Careless employees are only careless because they are improperly supervised.

Supervisors have a greater responsibility for preventing accidents than any other group of persons. Good supervision is necessary to obtain efficient production. To be successful, the supervisor must have the confidence, respect, and cooperation of each employee.

To a large extent, the success in avoiding accidents and injuries depends on the interest of and example set by the supervisor. Without setting a proper example, the supervisor cannot expect the employees to follow safe practices. On the other hand, if the supervisor not only believes in safety but also practices it, the employees will follow leadership and do their work safely and efficiently.

The supervisor is the personal contact between top management and labor--the so-called "key" in the mining industry. A safety program cannot succeed without the whole-hearted support and good leadership of the supervisors.

ABSTRACT
FROM
FATAL ACCIDENT

May 1982

COAL MINING SECTION

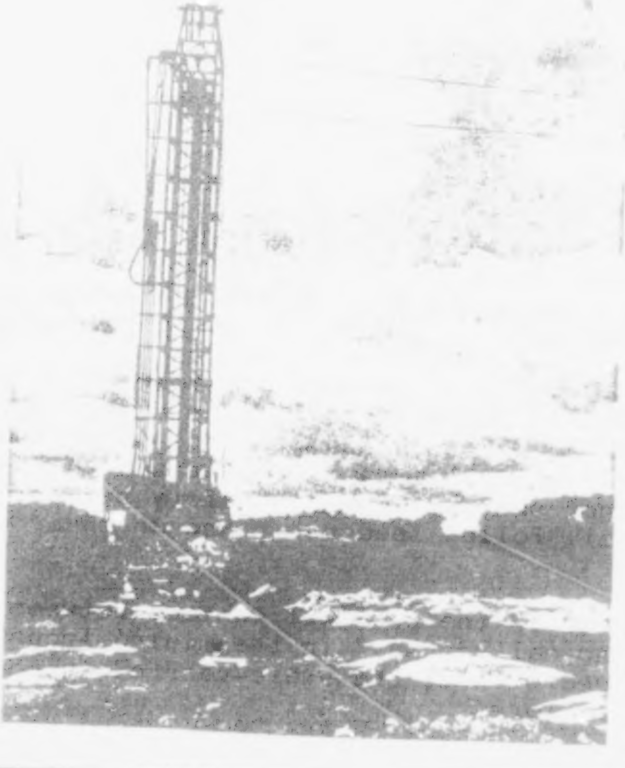
HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

SURFACE COAL ACCIDENT

General Information: [illegible] the accident occurred [illegible] the [illegible] resulted in the death of a highwall drill operator. The accident occurred when the mast of the vertical drilling rig came in contact with the overhead high-voltage powerline. The victim stepped from the operator's compartment of the rig to the ground while holding onto a handrail attached to the metal frame of the drilling rig and was electrocuted.

Description of Accident: The highwall drill operator was assigned [illegible] drilling [illegible] shot holes [illegible] to be used for [illegible] above the coalbed. After he finished drilling the holes in the third row, he went to the [illegible] in front of the vertical drilling rig [illegible] the location of the first hole to be drilled in the fourth row. The mast was in a vertical position. When the vertical drilling rig was stopped, the mast was in contact with the overhead energized powerline. The operator, not realizing the mast of the rig was in contact with with overhead powerline, stepped from the operator's compartment to the ground while holding onto a handrail attached to the metal frame of the drilling rig and was electrocuted.

Cause of Accident: The accident occurred because management permitted the victim to operate the mast of the vertical drilling rig within 10 feet of energized high-voltage powerlines without ensuring that adequate precautions were taken. This is a violation of Section 77.807-2.



ABSTRACT
FROM
FATAL ACCIDENT

MINING SECTION

[illegible]

[illegible] A miner was fatally injured when he was struck and pinned by a slab of rock which fell [illegible] drift. [illegible]

[illegible]

[illegible]

[illegible]

[illegible] Miners shall examine and test the back, face, and rib of their working places at the beginning of each shift and frequently thereafter. Supervisors shall examine the ground conditions during daily visits to insure that proper testing and ground control practices are being followed. Loose ground shall be taken down or adequately supported before any other work is done.

May 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Vacation With Safety

Our safety message for today concerns an event that we have been looking forward to for several months. I am referring to our annual vacation period, which is just around the corner, maybe just a few days away.

Most of us will take a vacation of some kind and we all want to have a good time. We need the chance to relax and enjoy time spent with our families and friends.

There are two important items to emphasize at this point. First, I want you back from your vacation safe, full of pep, and ready to begin your duties with renewed vigor, for we still must cope with the problem of earning a living for our families. Stated briefly, don't get hurt. Have a happy, healthy, safe vacation.

Maybe some of you are wondering why I'm warning you about the possibility of accidents while on vacation. Recall a year ago during the vacation season and you will remember that newspapers and radio and television stations were carrying numerous accounts of accidents happening to people while on trips - or staying at home. These accounts involved many forms of accidents, such as auto accidents, drownings, fires, falls, and so on down the line. The company wants you back safe and sound, since a business is only as good as its employees and we need a full crew to show best results.

Records on vacation accidents are not complete, but we can correctly assume from what is available that the injury rate is much higher than for any good mine. This doesn't have to be though, for in nearly every case the person who was injured took a chance, or didn't take the time to think.

There are numerous ways to get hurt while on vacation. The opportunity of being injured rides along with you and your family on every vacation trip. It is your silent, unwanted partner all the way, but it can be held in check by being safety-minded in all your activities, whether driving or at play. Use your head, and you will have a safe vacation and come back whole and hearty.

Another point that we must not overlook is the interval between the present and the start of your vacation. Naturally, your minds may want to wander to the scheduled events you have planned, but in order to fulfill the happy events you have scheduled, you will need to give your work duties your undivided attention. I can think of nothing that would ruin someone's vacation plans more than for the person to have an accident just before the scheduled event. Can you imagine the feeling of a person who is forced to spend his vacation with an arm or leg in a cast or maybe confined to a hospital with a more serious injury? Recall in your minds the safe work practices we have discussed during the past year and use them unfailingly so that you and the rest of our crew will be able to enjoy a safe and happy vacation.

Thought for the week: Don't let an accident ruin your vacation plans.

HURRY....HURRY....... HURRY!

LAST CALL TO THE

ANNUAL MEETING OF THE HOLMES SAFETY ASSN., WILL BE HELD AT QUALITY INN/CENTRAL, 1190 COURTHOUSE ROAD, ARLINGTON, VA. 22201
TUESDAY, MAY 25, 1982, 10:am

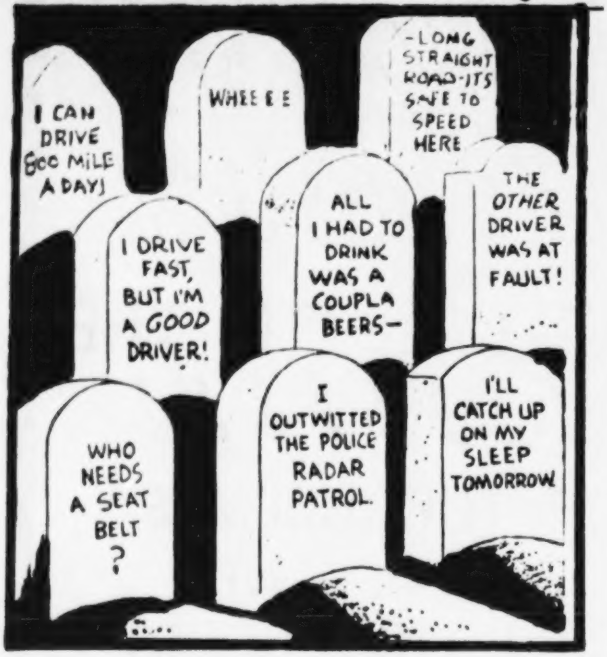
LODGING. FOOD. DRINKS. MEETING ROOM ALL AT ONE LOCATION 4 BLOCKS FROM SUBWAY.

THERE WILL BE A
HOSPITALITY BAR
MONDAY, MAY 24, 1982
7 — 10 P.M.

SECRETARY

THE LAST WORD

Last Words--On Safety


I CAN DRIVE 600 MILE A DAY!
WHEEEE
-LONG STRAIGHT ROAD-ITS SAFE TO SPEED HERE
I DRIVE FAST, BUT I'M A GOOD DRIVER!
ALL I HAD TO DRINK WAS A COUPLA BEERS—
THE OTHER DRIVER WAS AT FAULT!
WHO NEEDS A SEAT BELT ?
I OUTWITTED THE POLICE RADAR PATROL.
I'LL CATCH UP ON MY SLEEP TOMORROW

Remember: Your reaction time is not what it was before you had those drinks.

Your stopping distance: from eye to brain to foot to wheel to road involves thinking distance plus braking distance.

Your stopping distance:
at 25 mph -- 61.4 feet
at 35 mph -- 105.0 feet
at 45 mph -- 159.0 feet
at 55 mph -- 225.0 feet
at 65 mph -- 302.0 feet

BELTS

Belts are useful--they have many purposes:

Belts hold up pants.
Belts help wheels turn.
Some people give "belts" - the recipient gets belted.

There is the "cotton belt," "corn belt," "sugar belt," and people who hit "below the belt."

But, the very best of all belts, used by intelligent people, are called seat belts! This kind of belt keeps you from being "belted" by the dashboard, steering wheel, windshield, or pavement when there is a motor vehicle accident. When cinched up snug, it gives the driver more positive control of the vehicle.

Seat belts have already prevented millions of injuries and saved thousands of lives. I suggest that we all get "Belted."

****

ALERT IS THE WORD!

Don't let your mind wander when performing any job that involves hazards...because a momentary lapse can lead to a permanent injury.

****

Did you know that--

1. Even before the arrival of police, it is permissible to move cars if they are a traffic hazard?

2. You are required to tell only your name and address and show your driver's license and vehicle registration. The law recognizes that you may be in a condition of shock and not competent to make a statement.

3. You do not have to sign anything for anyone.

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MSHA, Holmes Safety Association
Education and Training
P.O. Box 25367
Denver, Colorado 80225

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JUNE 1982

HOLMES SAFETY ASSOCIATION

SAFETY EFFICIENCY
MINERAL INDUSTRIES

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

in this issue....

June 1982

1. Poster "Alive and Well Coal Company"
2. Safety Topic "Remarks by Ford B. Ford at the 1982 Annual Meeting of Holmes Safety Association"
3. Safety Topic "Listen for Accidents"
4. Table 4 "Accident Classification"
5. Safety Topic "Part 75.501--Subpart F--Electrical Equipment"
6. Safety Topic "Part 77.1708-1709--Subpart R--Miscellaneous"
7. Abstract "Electrical Accident"
8. Safety Topic "Part 55.15--Personal Protection"
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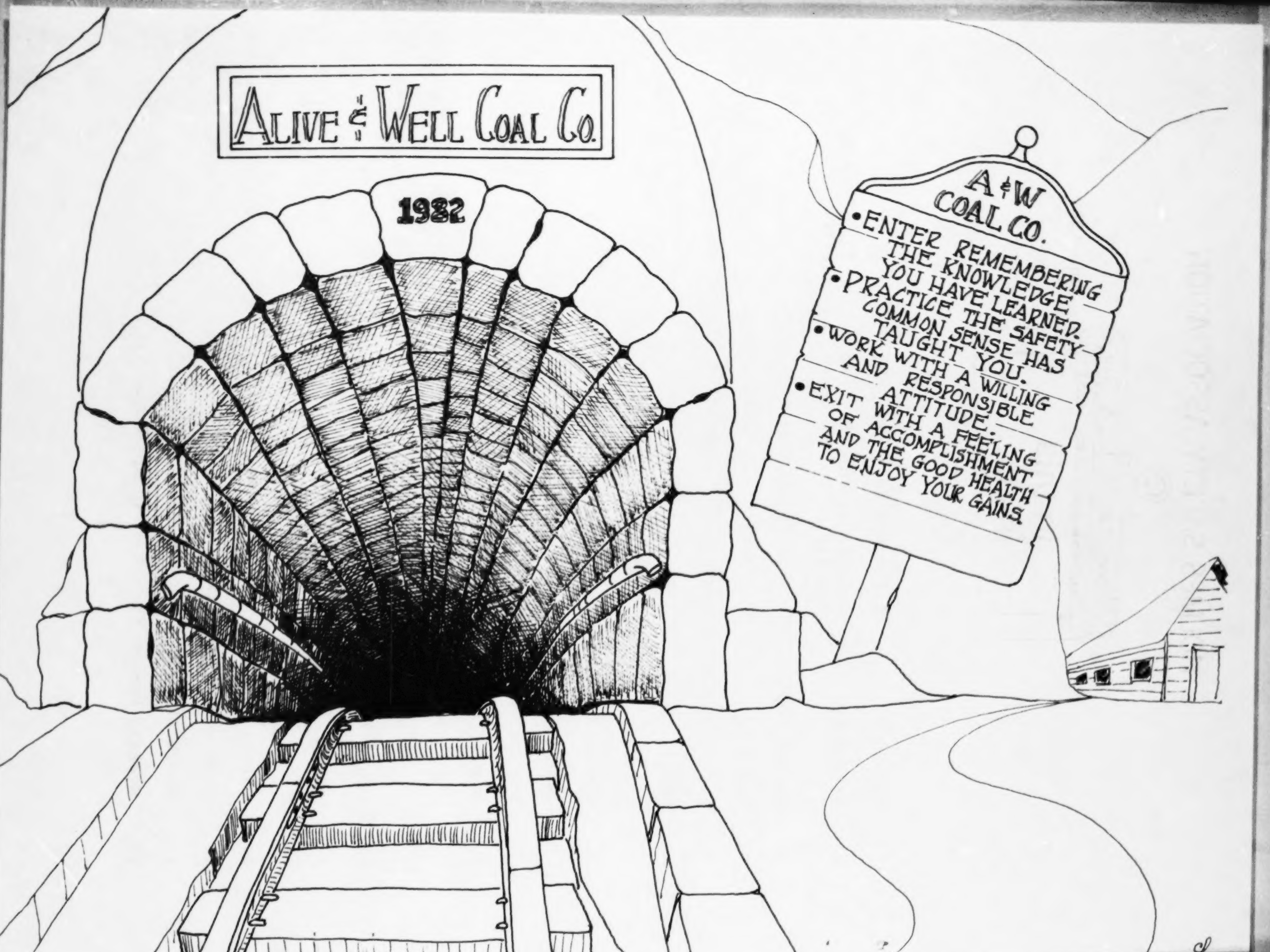
10. Don't Cheat Yourself
11. Safety Topic "Self-Preservation"
    "He Should Know Better"
    "Ouch"
12. Guard Your Health
13. Safety Topic "Start With You"
    "Second Sight"
14. Safety Topic "You're Never Too Old"
15. Have a Happy Vacation
16. The Last Word
17. Meeting Report Form (chapters only)


ALIVE & WELL COAL CO.
1982
A & W COAL CO.
• ENTER REMEMBERING THE KNOWLEDGE YOU HAVE LEARNED.
• PRACTICE THE SAFETY COMMON SENSE HAS TAUGHT YOU.
• WORK WITH A WILLING AND RESPONSIBLE ATTITUDE.
• EXIT WITH A FEELING OF ACCOMPLISHMENT AND THE GOOD HEALTH TO ENJOY YOUR GAINS.

June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Remarks by Ford B. Ford
at the 1982 Annual Meeting of
the Holmes Safety Association
Arlington, Virginia, May 25, 1982

Good Morning:

I am pleased and honored to have the opportunity to welcome all of you to the 1982 Annual Meeting of the Holmes Safety Association. In the several months since I have been with Mine Safety and Health Administration I have become well acquainted with this association and impressed with its history and work, and equally impressed with its potential to do still more in promoting the health and safety of the nation's miners.

As you may know, I came to MSHA last year with considerable experience both in management and in job safety and health. Although my mining experience was minimal, I have found that the same principles I learned from my previous workyears also apply to mining. But, I've also learned that many things make mining different and unique.

Mining has unique hazards. It has unique environments, unique equipment, and a unique language. But, that's not all. There is also a unique spirit, I've learned, that makes mining people a special breed.

A Kentucky coal miner, who was quoted in a recent report on the American Coal Industry, said it this way: "The bond between coal miners is stronger than (between) most working people," he said. "It has to be. You let something happen in the coal mines and everybody would die together. So coal miners stick together. You can stand there and cuss a man," he said, "--Call him everything in the world. But, if you get hurt, he's right there by your side .... They'll risk their lives to get you out of there...."

Since joining MSHA, I've seen this spirit at work in many ways. I've seen it in the commitment of so many MSHA personnel to their work of protecting miners' safety and health. I saw it vividly in the dedicated efforts of the mine rescue teams and many others during the three tragic mine explosions that occurred this past winter.

This spirit of concern and commitment has been the foundation for much of the progress in mine safety and health during this century. It was in this spirit that labor and industry, united by their concern over the enormous toll of mining disasters and other accidents, and with the leadership of Joseph A. Holmes, persuaded congress in 1910 to create the U. S. Bureau of Mines. Holmes was himself an outstanding example of this spirit; and it was under his guidance that the first great strides were taken towards making the mines safer places to work--the first systematic training in mine rescue and fist aid, the first scientific research into the causes of mine disasters and other accidents, the first safety testing of mine equipment. And, it was in this spirit that the Holmes Safety Association was founded, to honor his memory, to spread the Gospel of Safety, and to bring together the grassroots organizations that were springing up wherever this gospel spread, cutting across geographical boundaries, across mineral industries, and joining all the sectors of the mining community--Industry, Labor and Government.

It is my hope that in coming months and years, we will see a rededication to this spirit of commitment and cooperation among all of us who have a concern for mine safety, whether in management, labor or government.

It is my hope that the mining community will come increasingly to realize that, when it comes to safety, none of us are adversaries. For years, the top managers of mining companies and engineers in the universities have been telling us, "A safe mine is a productive mine." There is no tradeoff between safety and production. True, we may sometimes disagree about the best way to achieve safety. But, if we bear in mind that a safe, productive mine is equally in the interest of management and miners, then by discussing our differences honestly and thoughtfully we can do more for safety than by working in opposition.

To promote this attitude of commitment and cooperation is one of the main goals of the reorganization which, as you may know, is now under way at MSHA. To accomplish this goal, we are bringing to bear within each district manager's authority the many different tools that MSHA has available--enforcement, technical assistance, conferences, and education. I feel that one of the most effective tools will be the Holmes Safety Association.

I've discussed the matter at length with Bill Hoover, here, and I have told him what I know this organization will be able to do as its part in this total safety effort.

It is my hope that the Holmes Safety Association will do still more to spread the gospel that a safe mine is a productive mine, and that measures taken to improve safety can pay off in a smoother-running operation as well as in human lives and health.

Holmes Safety Association meetings can be a forum where management can make it clear to supervisors and miners that it is fully committed to safety and health, and that safety practices are equal in importance with production.

It will be a means of bringing home to supervisors their responsibilities for safety--not only in supervising other miners but also in practicing what they preach.

I hope that it will, increasingly, be a forum for two-way communication from miners to management as well as from management to miners, so that management can learn of safety issues and concerns that may be causing problems in the operation.

Its sessions can provide a chance to spread the word about new developments in safety and health, as well as reminding the members to keep safety constantly in mind.

And above all, I hope that it will be a forum for workers, supervisors, inspectors and others to meet and discuss safety issues in an atmosphere of mutual respect and concern, to talk together and work together to keep the mining operation a safe and healthy place for all to work.

As the Holmes Safety Association meetings accomplish these things, they will play an important part in each mine's safety and health efforts. Experience has shown that, where management is committed to safety and health, where this commitment is well-known at all levels, where supervisors understand their responsibilities for safety as well as production, where individual miners are committed to working safely, and where there is two-way communication on safety questions--these are the mines that most often have outstanding safety records. If every mine in the country had its chapter of the Holmes Safety Association, and used the meetings to accomplish these goals, I think there is no question we would see an improvement in mine safety nationwide.

Accordingly, as I've told Bill, the Holmes Safety Association has my full support. I'm encouraging the Association to expand still further, and to involve still more members of the mining community, expecially those in the labor sector. And, under the reorganization, I have made participation and support of the Holmes Safety Association a function of every MSHA district organization. I know that everyone in this association will continue the good work and strive to promote still more effectively the cause of cooperation in mine safety and health.

The president of a local coal mining union put it well in a recent letter to the United Mine Workers Journal. He said, "Everyone working together has proven at many of our mines that coal can be mined without a lost time accident, let alone a fatality, and I firmly believe that when working together, if we can mine coal safely at any of our mines, we can mine coal safely at all of our mines. All it takes is dedication on everyone's part....

".... I ask for nothing more, and I will not be satisfied with anything less."

Neither should we.

Thank you.

MINING SECTION

HOLMES SAFETY ASSOCIATION

June 1982

Listen For Accidents

What would be your first reaction to a sign with the following wording: "Accidents--Contagious Disease--Keep out."

This warning sign is not as absurd as it may first seem after giving it a little thought. Competent people connected with various safety organizations have evidence that there are such things as "accident carriers" who infect others, just as there are, for example, smallpox carriers. There is also proof that there are symptoms that we can listen for and use to fight the accident carriers.

In an effort to overcome the accident infection, physical safeguards have been introduced as a form of vaccine or serum, and, as a result, less than 10 percent of our injuries in industry result from mechanical failures.

The medical profession recognizes that there are psychological and emotional components in all diseases. The emotional factors of illness are treated along with the physical--and the accident disease is no different.

Physical guarding, elimination of physical hazards, use of personal protective devices, safer working conditions--all have paid off handsomely in reducing injuries, but still people are being injured. We need to study the symptoms of the accident disease. What are they? Perhaps you have guessed that one of the more important symptoms is attitude. Attitude is as much a symptom as a sore throat, skin rash, or elevated temperature. Numerous reliable studies have shown that as an individual employee's safety attitude worsens, the number of injuries increases. These studies further showed that persons suffering lost-time injuries knew how to work safely, but, as the familiar expression states, "knowing was not enough."

The following are some of the symptoms of the accident disease that you and I should be looking for in order to detect accidents in the making:

1. Errors in performing work duties.
2. Changes in routine behavior and manners.
3. Near accidents.
4. Inability of the individual to concentrate.
5. Violations of safe working practices.
6. A sulky, surly attitude.

These accident symptoms do not mean that an accident is immediate or pending, but we cannot ignore them, for, if we did, we would be missing an opportunity to offset possible accidents.

TABLE 4 - NUMBER OF INJURIES BY MINERAL INDUSTRY, WORK LOCATION, AND ACCIDENT CLASSIFICATION, JANUARY - DECEMBER, 1981 - CONTINUED

(PRELIMINARY DATA - REFER TO NARRATIVE FOR LIMITATIONS AND SCOPE OF DATA)

ACCIDENT CLASSIFICATION	NONMETAL									STONE									SAND AND GRAVEL		
	UNDERGROUND			SURFACE			MILLS			UNDERGROUND			SURFACE			MILLS			SURFACE		
	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL
ELECTRICAL	1	5	4	1	1	1	3	7	-	-	-	1	1	14	2	-	18	4	-	15	-
ENTRAPMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-
EXPLODING VESSELS UNDER PRESSURE	-	5	-	-	1	-	-	3	2	-	-	-	-	2	1	-	1	-	-	4	2
EXPLOSIVES AND BREAKING AGENTS	-	1	-	-	-	-	-	-	-	-	-	-	1	2	-	-	2	-	-	-	2
FALLING, ROLLING, OR SLIDING MATERIAL	1	9	2	-	4	1	-	6	3	-	3	-	-	10	3	1	22	13	1	5	1
FALL OF FACE, RIB, SIDE OR HIGHWALL	-	16	8	-	-	-	-	-	-	-	1	-	1	5	1	-	-	-	-	1	1
FALL OF ROOF (UNDERGROUND MINES ONLY)	-	22	8	-	-	-	-	-	-	-	11	2	-	-	-	-	-	-	-	-	-
FIRE	-	-	-	-	1	-	-	5	1	-	-	-	-	7	-	-	2	6	-	3	2
HANDLING MATERIAL	-	123	66	-	79	51	1	415	152	-	22	4	-	324	121	1	450	267	-	215	93
HAND TOOLS	-	40	53	-	22	30	-	80	98	-	13	3	-	97	81	-	155	126	-	68	57
NONPOWERED HAULAGE	-	-	1	-	3	-	-	5	2	-	-	-	-	2	1	-	15	2	1	-	-
POWERED HAULAGE	1	71	18	3	25	6	2	83	21	-	7	2	3	102	32	-	87	18	4	61	17
HAULAGE TRUCKS	-	10	4	1	10	1	-	8	3	-	3	1	2	42	13	-	27	5	-	11	8
FRONT-END LOADERS	1	1	2	-	4	-	-	12	4	-	1	-	1	24	7	-	7	1	3	21	3
ALL OTHER POWERED HAULAGE	-	60	12	2	11	5	2	63	14	-	3	1	-	36	12	-	53	12	1	29	6
HOISTING	-	5	4	-	-	-	-	1	2	-	1	-	-	-	-	-	4	1	-	-	-
IGNITION OR EXPLOSION OF GAS OR DUST	-	1	-	-	1	-	-	3	-	-	1	-	-	2	1	1	8	3	-	3	1
IMPOUNDMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INUNDATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MACHINERY	-	88	38	-	35	21	1	94	52	-	18	4	3	124	78	6	192	105	2	87	58
DOZER	-	-	-	-	7	-	-	-	1	-	-	-	-	5	2	-	-	-	-	7	6
DRILL	-	2	7	-	3	-	-	-	2	-	1	1	2	17	8	-	3	1	-	1	-
ALL OTHER MACHINERY	-	86	31	-	25	21	1	94	49	-	17	3	1	102	68	6	189	104	2	79	52
SLIPS OR FALLS OF PERSON	-	95	19	-	62	13	-	205	53	-	17	3	1	243	46	-	297	75	1	145	33
STEPPING OR KNEELING ON OBJECT	-	34	3	-	12	2	-	33	5	-	1	-	-	26	7	-	58	9	-	18	7
STRIKING OR BUMPING	-	2	3	-	-	3	-	7	7	-	-	-	-	3	4	-	15	5	-	1	4
OTHER	-	6	2	-	4	5	-	23	22	-	2	-	-	23	11	-	32	30	-	9	11
TOTAL	3	523	229	4	250	133	7	970	420	-	97	19	10	986	389	9	1,358	666	9	636	289

TABLE 4 - NUMBER OF INJURIES BY MINERAL INDUSTRY, WORK LOCATION, AND ACCIDENT CLASSIFICATION, JANUARY - DECEMBER, 1981

(PRELIMINARY DATA - REFER TO NARRATIVE FOR LIMITATIONS AND SCOPE OF DATA)

ACCIDENT CLASSIFICATION	COAL									METAL								
	UNDERGROUND			SURFACE			PREPARATION PLANTS			UNDERGROUND			SURFACE			MILLS		
	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL	FATAL	NFDL	NDL
ELECTRICAL	9	222	19	2	25	6	-	9	3	-	25	3	1	18	1	-	11	2
ENTRAPMENT	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EXPLODING VESSELS UNDER PRESSURE	-	17	4	-	6	2	-	4	-	-	8	4	-	5	4	-	2	2
EXPLOSIVES AND BREAKING AGENTS	3	24	3	2	7	2	-	1	-	5	22	9	2	2	2	-	-	-
FALLING, ROLLING, OR SLIDING MATERIAL	-	69	28	4	14	3	-	8	2	3	41	23	-	7	2	-	18	10
FALL OF FACE, RIB, SIDE OR HIGHWALL	4	305	20	-	12	5	-	-	-	2	82	40	-	3	2	-	1	-
FALL OF ROOF (UNDERGROUND MINES ONLY)	37	753	106	-	-	-	-	-	-	1	146	122	-	-	-	-	-	-
FIRE	-	18	4	-	12	5	-	1	3	-	3	2	-	3	-	-	-	4
HANDLING MATERIAL	1	3,975	526	-	703	280	-	328	108	1	575	420	-	282	182	-	451	343
HAND TOOLS	-	857	351	-	210	184	-	105	63	-	178	256	-	88	124	-	135	177
NONPOWERED HAULAGE	-	23	1	-	3	-	-	3	2	-	8	4	-	1	-	-	12	7
POWERED HAULAGE	20	1,605	164	9	227	58	6	69	19	8	217	69	5	106	27	1	50	22
HAULAGE TRUCKS	-	9	3	9	152	34	4	17	2	2	25	6	3	74	15	-	14	5
FRONT-END LOADERS	4	6	1	-	28	14	-	9	4	-	8	5	1	5	-	-	4	1
ALL OTHER POWERED HAULAGE	16	1,590	160	-	47	10	2	43	13	6	184	58	1	27	12	1	32	16
HOISTING	1	12	2	-	-	-	-	-	-	4	15	8	-	-	-	-	-	-
IGNITION OR EXPLOSION OF GAS OR DUST	36	10	1	-	9	3	1	3	2	-	-	1	-	3	1	-	2	-
IMPOUNDMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INUNDATION	3	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-
MACHINERY	6	1,569	256	5	293	107	1	59	40	2	389	313	1	93	72	3	138	135
DOZER	1	4	-	1	59	8	-	3	1	-	-	-	-	9	2	-	2	1
DRILL	-	4	2	2	26	9	-	1	-	1	13	2	-	14	2	-	1	1
ALL OTHER MACHINERY	5	1,561	254	2	208	90	1	55	39	1	376	311	1	70	68	3	135	133
SLIPS OR FALLS OF PERSON	1	1,541	117	-	625	135	2	238	41	1	387	162	1	220	50	-	324	92
STEPPING OR KNEELING ON OBJECT	-	340	29	-	85	12	-	21	2	-	64	18	-	32	4	-	53	10
STRIKING OR BUMPING	-	219	41	-	7	5	-	6	6	-	7	10	-	3	6	-	6	18
OTHER	-	96	14	-	29	23	-	14	8	-	22	17	-	28	6	-	24	19
TOTAL	121	11,655	1,687	22	2,267	830	10	869	299	28	2,192	1,481	10	891	483	4	1,224	841

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LET'S STOP THAT NUMBER 1 KILLER

WATCH THAT ROOF

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June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Subpart F--Electrical Equipment

Part 75.501 deals with permissible electric face equipment and coal seams above the water table.

On and after March 30, 1974, all electric face equipment, other than equipment referred to in paragraph (b) of Section 75.500, which is taken into and used inby the last open crosscut of any coal mine which is operated entirely in coal seams located above the water table and which has not been classified under any provision of law as a gassy mine prior to March 30, 1970, and in which one or more openings were made prior to December 30, 1969, shall be permissible.

Part 75.501-1 is concerned with coal seams above the water table. As used in Part 75.501, the phrase "coal seams above the water table" means coal seams in a mine which are located at an elevation above a river or the tributary of a river into which a local surface water system naturally drains.

Part 75.501-2 discusses permissible electric face equipment.

(a) On and after March 30, 1971, in mines operated entirely in coal seams which are located at elevations above the water table:

(1) All junction or distribution boxes used for making multiple power connections inby the last open crosscut shall be permissible; and

(2) All handheld electric drills, blower and exhaust fans, electric pumps, and all other electric-driven mine equipment, except low horsepower rock dusting equipment, that employs an electric current supplied by either a power conductor or battery and consumes not more than 2,250 watts of electricity, which is taken into or used inby the last open crosscut shall be permissible.

(b) On and after March 30, 1974, in mines operated entirely in coal seams which are located at elevations above the water table, all electric face equipment which is taken into or used inby the last crosscut shall be permissible.

Part 75.501-3--New openings; mines above water table and never classed gassy.

(a) Where a new opening(s) is proposed to be developed by shaft, slope, or drift from the surface to, or in, any coalbed and the operator considers such proposed new opening(s) to be a part of a mine coming under section 305(a)(2) of the Act and Part 75.501 the operator shall so notify the District Manager for the District in which the mine is located in writing prior to the date any actual development (in coal) through such opening(s) is undertaken. Such notification shall include the following information:

(1) Name and address and identification number of the existing mine.

(2) A current map of the existing mine clearly setting out the proposed new opening(s), mining plan and planned interconnection, if any, with existing workings.

(3) A statement as to when the operator obtained the right to mine the coal which the proposed new opening(s) will traverse.

(4) The name of the coalbeds currently being mined and those which the new opening(s) will traverse.

(5) The expected life of the mine.

(6) The reason(s) for the proposed new opening(s) (for example, haulage, ventilation, drainage, to avoid bad roof, escapeway).

The District Manager shall require submission of any additional information he/she considers pertinent.

(b) The District Manager shall make a determination based on all of the information submitted by the operator as to whether the proposed new opening(s) will be considered as a part of the existing mine or as a new mine. The following guidelines and criteria shall be used by the District Manager in making his/her determination:

(1) The effect that the proposed new opening(s) will have on the safety of the miners working in the existing mine shall be considered of primary importance.

(2) Whether the operator had a right to mine the coal which the proposed new openings will traverse prior to the date of enactment of the Act (December 30, 1969) and whether the original mining plan included mining such coal.

(3) Whether, in accordance with the usual mining practices common to the particular district, the proposed new openings would have been considered a new mine or part of the existing mine. A number of factors will be considered including, but not limited to:

(i) The relationship between the coalbeds currently being mined, and those proposed to be mined;

(ii) The distance between existing openings and the proposed new opening(s);

(iii) The projected time elapsing between the start of the new opening(s) and planned interconnection, if any, with the existing mine; and

(iv) The projected tonnage of coal which is expected to be mined prior to interconnection where interconnection is planned.

The District Manager shall notify the operator in writing within 30 days of receiving all of the information, required and requested, of the determination. No informal notification shall be given.

(c) All new opening(s) shall be operated as a new mine prior to receiving a written notification from the District Manager that such new opening(s) will be considered part of an existing mine coming under section 305(a)(2) of the Act and Part 75.501.

(d) Nothing in this Part 75.501-3 shall be construed to relieve the operator from compliance with any of the mandatory standards contained in this Part 75.

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Excerpts from Code of Federal Regulations
Part 77--Surface Coal Mines and Surface Work Areas of Underground Coal Mines
Subpart R--Miscellaneous

Part 77.1708--Safety program; instruction of persons employed at the mine.

On or before September 30, 1971, each operator of a surface coal mine shall establish and maintain a program of instruction with respect to the safety regulations and procedures to be followed at the mine and shall publish and distribute to each employee, and post in conspicuous places throughout the mine, all such safety regulations and procedures established in accordance with the provisions of this section.

Part 77.1709--Safety training; inexperienced employees.

New employees shall be indoctrinated in safety rules and safe work procedures and inexperienced employees shall not be assigned to work duties until they have been trained thoroughly in safe work procedures related to the assigned work duties.

ABSTRACT
FROM
FATAL ACCIDENT

June 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Electrical Accident

General Information: A chief electrician was electrocuted while disconnecting energized motor leads inside a motor control center. The victim had nine years of electrical experience with this company, the last year as chief electrician.

The mine was an open-pit phosphate operation. Excavation of the phosphate was essentially a strip-mining operation in which the overburden was removed and placed in adjacent mined-out areas. The underlying matrix was excavated by large draglines and deposited in shallow sumps or wells where hydraulic guns broke up the material. The resulting slurry was pumped through large diameter pipelines to the beneficiation plant for washing, screening, sizing, and flotation. Electricity was used extensively for motive power throughout the mine and plant.

Description of Accident: On the evening preceding the accident, a power outage occurred at the drier plant and hydraulic station. An electrical flash was observed in one of the 4,160-volt pump motors and the ground fault protection tripped the main circuit breaker at the control center. An electrician was called from home for the purpose of restoring power to the control center so that operation of the other pumps could resume. He locked out the line starter for the faulty motor, reset the control center breaker, and left the property.

The electrician returned to the control center the following morning to disconnect the faulty motor so that it could be removed and repaired or replaced. After making certain the starter was still locked out, he went to the motor and removed the junction box cover. Upon cutting the insulation, the electrician received an electrical shock. Being puzzled about the source of the power in the circuit, he called the chief electrician (the victim) and explained the problem to him. The chief electrician advised him to stay away from the area until he arrived.

After physically comparing the starter for the faulted motor to another exactly like it, the chief electrician concluded that the voltage involved must be coming from the capacitor. He attempted to bleed off the charge by shorting a motor lead connection to the frame of the cubicle with a screwdriver. A small arc was observed but he was unable to discharge the capacitor. He then decided to disconnect the motor leads at the starter in spite of the circuit being energized. He wrapped the handle of an adjustable wrench with high-voltage tape, and using the taped wrench and water pump pliers, began to remove the motor leads from the stand-off insulators inside the cubicle. By holding the bolt head with the pliers and loosening the cap screw with the wrench, he and the electrician removed two of the three leads without incident. The electrician was wearing high-voltage gloves and would remove the bolts in turn after the chief electrician had loosened them with the tools.

When the chief electrician attempted to remove the third lead which was more difficult to reach, his hand apparently slipped onto the bare ends of the pliers, which preceded his electrocution. There was a buzzing sound, a flash, and the chief electrician seemed to be drawn farther into the cubicle.

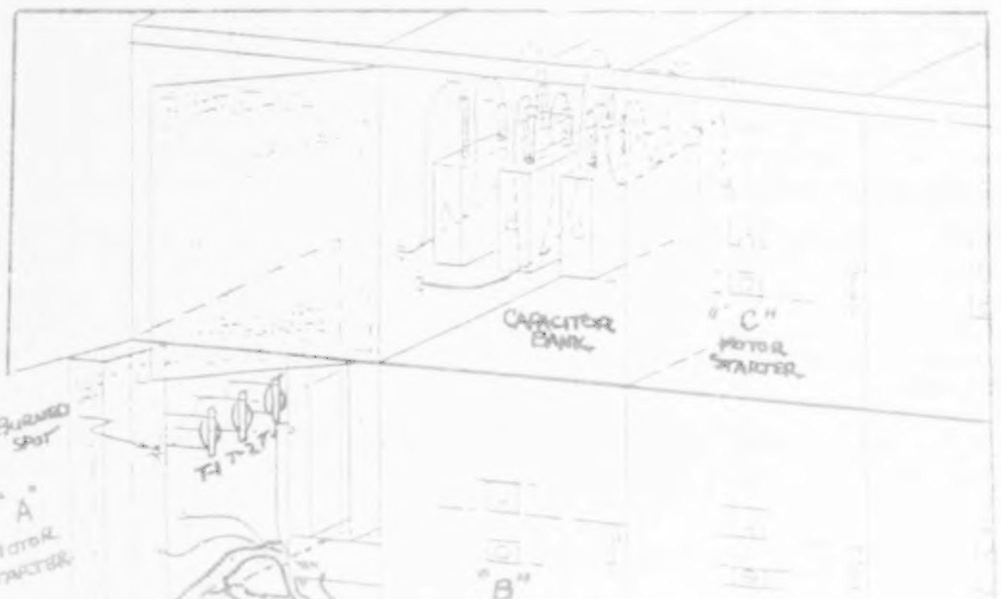
He was pulled out immediately with a hot stick and mouth-to-mouth resuscitation and CPR were administered. Burns on the victim indicated the current initially entered his body through the little finger of his right hand and exited at his left side where it contacted the cubicle frame.

Cause of Accident: The accident was caused by an unsafe act on the part of the victim by attempting to remove the motor leads knowing they were energized.

Recommendations:

Part 55.12-29--Cross wiring of the capacitors should have been detected through inspection immediately after installation was made.

Part 55.14-16--Tools and equipment should be used only for the purpose and within the capacity for which they were intended and designed.



June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
Subchapter N--Metal and Nonmetallic
Open-Pit Mines
Part 55.15--Personal Protection

At this time, we shall discuss Section 55.15 "Personal Protection" standards from the Federal Code of Regulations which pertain to all open pit metal and non-metal mines. The standards in this section are for the purpose of health and safety, and the prevention of accidents in surface mines which are subject to the Act. All of the standards are mandatory and the failure to comply shall result in a citation being issued to the mine operator.

55.15 Personal Protection

55.15-1 Adequate first aid materials, including stretchers and blankets, shall be provided at places convenient to all working areas. Water or neutralizing agents shall be available where corrosive chemicals or other harmful substances are stored, handled, or used

55.15-2 All persons shall wear suitable hard hats when in or around a mine or plant where falling objects may create a hazard.

55.15-3 All persons shall wear suitable protective footwear when in or around an area of a mine or plant where a hazard exists which could cause an injury to the feet.

55.15-4 All persons shall wear safety glasses, goggles, or face shields or other suitable protective devices when in or around an area of a mine or plant where a hazard exists which could cause injury to unprotected eyes.

55.15-5 Safety belts and lines shall be worn when persons work where there is danger of falling; a second person shall tend the lifeline when bins, tanks, or other dangerous areas are entered.

55.15-6 Special protective equipment and special protective clothing shall be provided, maintained in a sanitary and reliable condition and used whenever (1) hazards of process or environment, (2) chemical hazards, (3) radiological hazards, or (4) mechanical irritants are encountered in a manner capable of causing injury or impairment.

55.15-7 Protective clothing or equipment and face-shields or goggles shall be worn when welding, cutting, or working with molten metal.

55.15-8 through 55.15-19 (reserved)

55.15-20 Life jackets or belts shall be worn where there is danger from falling into water.

55.15-21 through 55.15-29 (reserved)

MINING SECTION

HOLMES SAFETY ASSOCIATION
June 1982

Safety Creed

All of us bear the unalterable responsibility for keeping out of harm's way as we go about our jobs.

It is believed that accidents are conceived in improper attitudes and born in moments of action without thought. They will cease only when the proper attitude is strong enough to precede the act--when the right attitude creates awareness that controls the act.

This seems to pinpoint the solution to accident prevention--personal responsibility. The philosophy of personal responsibility isn't anything new to us; it's an essential part of our American way of life. We should want to do these things; it's the opposite of dictatorship, which implies blind, passive obedience to orders one does not understand or want to understand.

Voluntary cooperation and individual initiative based on a strong sense of personal responsibility are far more effective in getting results than coercion, compulsion, or fear. Freedom from harm is not a privilege, but a goal to be achieved and perpetuated.

How we "measure up" in safety this day, week, month, or year depends a great deal on how much knowledge we gain from the accident experiences of yesterday, last week, last month, or last year. Improvement will depend on more acceptance of personal responsibility greater consideration of others, and--most of all--on our being both a "buyer" and a "seller."

Since there is nothing in this world as inexpensive as the expression of safety, purchase all you can, then try selling it to others. It's an open market with untold dividends for all parties.

LET'S STOP THAT NUMBER 1 KILLER

WATCH THAT ROOF

MINING SECTION

HOLMES SAFETY ASSOCIATION

June 1982

Don't Cheat Yourself

There are two common causes of work injuries, conditions and behavior. Thousands of people have been injured because of an unsafe condition, but many accidents and injuries result from unsafe acts of one kind or another. Accidents can also happen because of a combination of the two--an unsafe condition and an unsafe act.

The worst possible combination that you can think of is a situation in which the employee, who gets hurt has created the unsafe condition. This type of accident happens because some foolhardy individual decides not to use a safety device. Many people have been hurt because they removed a guard from a machine, or figured out a way to cheat a safety device.

When this situation develops, the worker has decided to do the job faster by cheating on safety. It can be done, but like crime, it doesn't pay. Although no crime was committed, the punishment may be worse than a judge would give. It could take the form of losing fingers or being injured in some other way, perhaps even being killed.

You have the right to expect the company to have safe equipment. However, in spite of guards, button controls, or other safety features, the equipment may not be perfect. You should realize, of course, that there is no such thing as a foolproof machine.

When a piece of machinery is equipped with a safeguard of some kind, you're expected to use it. You may think it's only to the company's advantage, but you have a bigger stake in it than the company. You are the individual who can get hurt and who will suffer the pain and other problems that accompany an injury.

A safety device, whether it is a form of eye protection or an installed temporary roof support, should never be bypassed or short-changed. Don't be guilty of cheating yourself. Use safety know-how to good advantage--YOURS!

LET'S STOP THAT NUMBER 1 KILLER

WATCH THAT ROOF

June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Self-Preservation

When we preserve something--whether it be fruit, vegetables, fish, or fowl, our purpose is to protect it against decay or damage. But preserve also means to protect against injury or destruction. While different methods may be used to preserve different things, the objective is the same. We want to protect whatever it is we intend to preserve.

So it is with self preservation. When we attend safety meetings, discuss accidents and injuries, read safety literature or watch safety movies, we begin to develop an awareness of the hazards that surround us and we automatically take the necessary precautions to guard against them. In so doing, we protect (or preserve) ourselves against accidents and possible injuries. That is self preservation.

Sometimes we may have many things on our minds. We may not stop to think about the hazards of the job and may forget to take the necessary precautions only to find out too late what should have been done to preserve ourselves from accidental injury.

Aren't we all interested in self preservation? Our lives are precious. If fruits and other food commodities are worth the time and effort it takes to preserve them, how much more time and effort should we devote to the task of self preservation?

It should be a full time around the clock job.

****

He Should Know Better--

A safety director was walking away from a shop after giving it a thorough inspection. He was looking over the notes he had made when he tripped and broke his arm. Lesson to be learned - reading and walking don't go together.

****

OUCH!!

Hands and fingers account for a large percentage of occupational injuries to the different parts of the body. That's why gloves or other hand protection is so important.

MINING SECTION

HOLMES SAFETY ASSOCIATION
June 1982

Guard Your Health

Good health is just about the most precious thing a man or woman can own. Strength of body, clearness of eye, quickness of motion --these are the things we all want.

Sometimes we take these things for granted. We haven't been sick much in our lives so we think that health is something that is going to be with us always. Health is made up of a lot of things: good rest, good eating habits, temperance, exercise and sensible protection against disease. All contribute greatly to good health.

But all the care we take of our health and all the skill of the doctors in healing us can be meaningless if we let accidents destroy in a second the fruits of a lifetime of good, healthful living.

It doesn't matter how good your health is if you try to oil a piece of machinery in motion and have your hand torn to shreds. A set of strong muscles isn't much protection if you step out in front of a taxicab or truck. Even the professional weightlifters with the bulging muscles know that they can tear those muscles if they try to lift their loads with their backs instead of their legs.

We can't be so healthy that we are protected against infection if we let even a small cut go without getting first aid.

Years ago there was a very popular song which went something like this: "Button up your overcoat when the wind blows free; take good care of yourself, you belong to me."

Well, we all belong to someone so wear your safety equipment and follow good safety practices. Take good care of yourself, keep healthy, keep happy, and don't let an unnecessary accident destroy your healthy life.

June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Start With You

Where the purpose is meaningful and the consequences are clear, risk-taking is a characteristic which human beings generally regard as a virtue.

On the other hand, safety is something we all believe in. We are certainly aware of the hazards involved in our daily existence. We don't knowingly take chances where the safety of our families is concerned. We hear the "warning bell" sound in our minds many times each day and when danger is clear and present, we respond.

And yet, too often we hear that warning bell in our minds and fail to respond, largely because the consequences are seemingly remote and unclear.

We are creatures of habit, so we accept these risks as a part of the game of life. Nothing has happened so far, so we ignore the warning signals.

Is this risk-taking where the purpose is meaningful? Is there bravery involved here or courage? Is there a principle involved? Of course not. In essence, our failure to respond is an act of negligence, a risk-taking without meaning or purpose.

How close do you have to come...and how often...before you really listen to that bell...and act on it when it rings.

The choice is yours.

****

Second Sight

How much do you really see? Only what your eyes look at, or do you also see with your imagination, knowledge and experience?

Suppose you're about to sharpen a tool on a grinding wheel. You see that the protection eye shield on the grinder has loosened and is out of place. Is that all you see? If you're looking with your mind's eye, then you will also see:

> the possibility of a tiny chip striking your eye;
> the need for wearing safety goggles as well as having the shield fixed;
> an image of yourself with a black patch over one eye;
> the difficulty of working or driving your car when one eye is sightless.

When you are tempted to risk your future, take a second look into the twilight zone of what could happen. Use your second sight.

June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

You're Never Too Old

Some people may have the mistaken idea that new employees with short service records are the ones who have most of the injuries. However, accident records in all industries show that old-timers are just as likely to get hurt as those who have been on the job for a short time. Usually, a new worker, being unfamiliar with the surroundings, is cautious. After being on the job a short time, however, that attitude may change and the "new employee" could become complacent and "throw caution to the wind."

When a person has been doing the same work for many years without an accident, the job may become so routine that the employee's attitude becomes casual. I am sure there are many reasons for this. Perhaps as the employee gains experience, a tendency develops to take chances or the employee may become bored. Maybe the employee becomes so familiar with the job that the worker lets his/her mind wander and thinks about personal affairs while working.

Whatever the reason, it's poor practice to feel that you have been on your job for so long that you can't get hurt. Some of the worst accidents have happened to people with long service. When an accident does happen to a long-term employee, the problem is usually felt more because of the additional obligations which come as we grow older.

It is only natural to relax and to feel more at ease after becoming acquainted with a particular job. A relaxed attitude is good on any job if you don't block out thoughts concerning your personal safety. Even though you have become acquainted with your duties, you should never lose sight of the fact that following safe job procedures is as necessary for the experienced individual as for the new miner.

****

Traffic Safety--is a very, if not the most important safety issue there is. Traffic safety is widely misused, often due to carelessness. Drive carefully. Don't insist upon your Rites.

****

IT'S TRUE--safety is no coincidence, it's a consequence.

HOLIDAYS

AHEAD-

DRIVE SAFELY

HOLMES SAFETY ASSOCIATION

June 1982

MINING SECTION

Have A Happy Vacation

Vacations and holidays are a personal thing. No one can tell you how to spend them. The suggestions that follow are meant only to help you avoid a few of the pitfalls that face all vacationers.

The temptation to pack 36 hours of activity into 24 hours is promptly ignored by the wise vacationer. A few days of playing 27 holes of golf, long swims, and other strenuous activity can lead to such exhaustion that the vacationer may not be able to fully enjoy the remainder of the vacation.

Vacations represent pay for time not worked. The wise vacationer believes it's a shame to cancel out the leisure they should bring with a solid schedule of remodeling, landscaping, or other projects. When nothing definite is planned, the vacationer can use part of the time to develop interests that can be carried over into retirement.

Getting away from it all does not necessarily mean you must cover 500 miles a day in your automobile. Don't overlook the excellent attractions in your own state or region--the same attractions that others travel miles to see. The Chamber of Commerce can point out hundreds of fascinating areas within a relatively few miles of your home.

Credit buying can too often carry over, with disturbing results, into vacation planning. Avoid excessive vacation spending that would put you over a financial barrel the remainder of the year.

Of necessity, workday tasks are governed by clocks and deadlines. Vacations are meant to provide a change of pace from this routine. Although you may plan your vacation well, be sure to allow plenty of time to do the unexpected.

The exuberance that accompanies vacations can lead to extended and unwelcome vacations. Don't take chances when motoring or playing. Have the car inspected for safety and insist that the family snaps on the seat belts. You will be needed back on the job where your coworkers look forward to seeing you--safe, sound and refreshed.

HOLIDAYS
AHEAD-

DRIVE SAFELY

June 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

THE LAST WORD

In Control

Computer people have a saying, "garbage in, garbage out." In other words, the computer will only respond to the information you feed it.

This holds true for all types of machines whether they are run by combustion, electricity, or atomic energy. They have no will of their own; they can only carry out the will of the operator.

Machines cannot make decisions; they do not learn from experience. The results are either productive or destructive, depending on the understanding of the operator.

****

New Wonder Drug

Of all the wonder drugs today, there is one which is 100 percent effective. It develops no allergy in the user and it provides instantaneous relief if applied. Unlike other drugs it does not build up an immunity to itself if used daily, but rather has a tendency to make one rely upon it for it is a panacea of the first water. It can prevent broken bones, twisted backs, loss of sight, even death. It is cheaper than aspirin, but not enough people buy it. It is not a narcotic, but people generally agree that we would all be better off if we became addicts. It is called SAFETY-MYCIN.

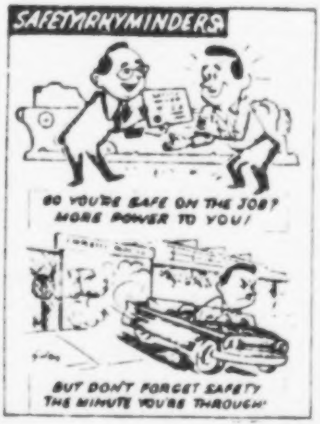
The Good Motorist's Prayer

Dear Lord, before I take my place
Today behind the wheel,
Please let me come with humble heart
Before thy throne and kneel.
And pray that I am fit to drive
Each busy thoroughfare,
And that I keep a watchful eye
Lest some small child be there.

And keep me thinking constantly
About the Golden Rule,
When driving past the playground
Or by some busy school.
Then when I stop to give someone
The right to cross the street,
Let me my neighbor's keeper be,
And spare a life that's sweet.

Please let me feel this car I drive
You gave me to enjoy,
And that its purpose is to serve
Our lives, and not destroy.

****


SAFETYRHYMINDERS
SO YOU'RE SAFE ON THE JOB?
MORE POWER TO YOU!
BUT DON'T FORGET SAFETY
THE MINUTE YOU'RE THROUGH!

Even the woodpecker owes its success to the fact that it uses its head!!

MSHA, Holmes Safety Association
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Denver, Colorado 80225

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HOLMES SAFETY ASSOCIATION
SAFETY EFFICIENCY
MINERAL INDUSTRIES

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

in this issue....

July 1982

1.	Safety Topic	"Second 1982 Slogan Decal is Available"
2.	Safety Topic	"Press Highlights--Executive and Regular Meetings National Council Holmes Safety Association"
3.	Safety Topic	"Part 55.16--Materials Storage and Handling"
4.	Poster	"Rings are a Hazard at Work"
5.	Poster	"Never Work on Running Machinery"
6.	Abstract	"Machinery Accident"
7.	Abstract	"Fall-of-Ground Accident"
8.	Safety Topic	"Let's Not Kid Ourselves" "Swimming Pool Safety"
9.	Safety Topic	"A Meaning of Safety"
10.	Meeting Report Form	(chapters only)

July 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

ATTENTION: BULLETIN READERS

Our second 1982 slogan decal is available. Again, we have a limited supply but will try to fill your requests.

Decals may be obtained by request to:

Linda M. Lofstead
MSHA, Holmes Safety Association
4800 Forbes Avenue, Room A273
Pittsburgh, PA 15213

FOLLOW SAFETY
THRU in
-82- MSHA

July 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

PRESS HIGHLIGHTS

Executive and Regular Meetings

National Council

Holmes Safety Association

The meetings were held at the Quality Inn/Central, 1190 North Courthouse Road, Arlington, Virginia, on May 25, 1982, with Thomas Shepich, deputy assistant secretary for MSHA and first vice president, HSA, presiding.

All official business was conducted and voted on by a quorum of 21 of the 38 executive members present at the executive meeting held at 9 a.m.

The regular meeting opened at 10 a.m., with an address by the Honorable Ford B. Ford, assistant secretary for MSHA.

Mr. Ford said that he is well acquainted with the Association and equally impressed with its potential to do still more in promoting the health and safety of the nation's miners. He stated that he came to MSHA last year with considerable experience both in management and in job safety and health. The same principles he learned from previous work years apply to mining.

Mr. Ford asked everyone to bear in mind that a safe, productive mine is equally in the interests of management and miners and by discussing our differences honestly and thoughtfully we can accomplish much for safety.

He stated that if every mine in the country had a safety chapter of the HSA and held meetings at the chapter and council levels, there is no question that we would see a nationwide improvement in mine safety.

Mr. Ford pledged his full support to the HSA and encouraged the Association to expand still further and involve more members of the mining community, especially in the labor sector. Under the reorganization, he said, participation and support of the HSA is a function of every MSHA district organization.

In closing he stated, "all it takes is dedication on everyone's part... I ask for nothing more, and I will not be satisfied with anything less."*

There were 50 delegates in attendance from 12 states representing the mining, quarrying, metallurgical, mineral-extractive and allied industries.

During consideration of an amendment to the Constitution and By-Laws, Article VI, Sec. 1 to include a fourth vice president, a motion was made and carried to represent insurance, manufacturers and suppliers. The amendment was passed during the third round of debate.

A special committee including Edward Onuscheck, chairman, William Parisi and John Miller, members, was empowered to review the Council's financial funds for investment.

After careful study by the Awards Committee, nine proposals were nominated for exceptional services in promoting the humanitarian objectives of the HSA. The following people were presented with the highest honor, the "Merit Award," by acting chair, Thomas Shepich:

Ronald Morse, safety director, Sahara Coal Company, Harrisburg, IL;

Lester Walker, coal mine inspector, MSHA, Kittanning, PA;

Raymond Arotin, safety director, Barnes & Tucker Coal Co., Barnesboro, PA;

Paul Lenyo, coal mine inspection supervisor, MSHA, Johnstown, PA;

Clayton Peters, planning engineer, Walker Coal Co., Bigler, PA;

John English, acting director of education and training, MSHA, Arlington, VA;

Richard Flack, safety director, Rochester & Pittsburgh Coal Co., Indiana, PA;

Thomas Krolick, co-owner, Krolick Contracting Co., Inc., Clearfield, PA;

James Krolick, co-owner, Krolick Contracting Co., Inc., Clearfield, PA.

The following slate of officers for 1982-1983 was moved, carried and adopted:

Officers

President, C. William Parisi, representing management from Pennsylvania.

First vice president, Thomas Shepich, representing federal from Virginia.

Second vice president, Walter Vicinelly, representing state from Pennsylvania.

**See Ford's full text in the June Bulletin.

Third vice president, Joseph Taylor, representing labor from Washington, DC.

Fourth vice president, David E. Hazlett, representing insurance from Pennsylvania.

Secretary-Treasurer, William Hoover, representing federal from Arizona.

Executive Committee

Raymond Ashby, safety director, Island Creek Coal Company, Kentucky.

Ralph Banks, safety director, Inland Steel, Illinois.

Robert Barrett, president, Wilmore Coal Company, Pennsylvania.

James Clem, director of safety, Peabody Coal Company, Missouri.

Daniel Cronin, general sales manager, Mine Safety Appliance Company, Pennsylvania.

William Eastgate, director of safety, Kaiser Steel Corporation, California.

John English, acting director, education and training, MSHA, Virginia.

Willard Esselstyn, secretary-treasurer, U.M.W.A., Washington, DC.

George Fish, Jr., staff engineer, U.S. Bureau of Mines, Washington, DC.

Ford B. Ford, assistant secretary, MSHA, Virginia.

Norman Gonder, safety coordinator, Duval Corporation, Arizona.

Kirk Harman, supervisory training specialist, MSHA, West Virginia.

Doug Huber, safety director, The Falkirk Mining Company, North Dakota.

Donald Huntley, district manager, MSHA, Pennsylvania.

Ronald Keaton, district manager, MSHA, West Virginia.

John Knisely, mine safety engineer, Fairmont Supply Company, Pennsylvania.

T. E. Kobrick, assistant manager of safety, Bethlehem Mines Corporation, Pennsylvania.

Emmett Lang, president, Central Pennsylvania Coal Producers' Association, Pennsylvania.

Dave Lauriski, manager/industrial relations, Kaiser Steel Corporation, Utah.

Elmer Layne, safety director, Old Ben Coal Company, Illinois.

Ray Light, sales manager, Gates Industries, Pennsylvania.

John Miller, safety specialist, MSHA, Pennsylvania.

E. J. Onuscheck, assistant to president, Rochester & Pittsburgh Coal Company, Pennsylvania.

Lanny E. P'Pool, president, Nemo Coal Company, Missouri.

Earle M. Rudolph, coal mine inspection supervisor, MSHA, Pennsylvania.

J. J. Shober, Jr., director of anthracite/deep mine safety, Pennsylvania Department of Environmental Resources, Pennsylvania.

John Shutack, district manager, MSHA, Pennsylvania.

Ben Spears, director, Amax Coal Company, Indiana.

John Takacs, coal mine inspector, MSHA, Pennsylvania.

Harry Thompson, coal mine inspection supervisor, MSHA, Pennsylvania.

Michael Trainor, district manager, MSHA, Pennsylvania.

Harold Turner, coal mine inspector, MSHA, Virginia.

Robert Vargo, general sales manager, National Mine Service, Pennsylvania.

Robert Vines, safety director, Bituminous Coal Operators' Association, Washington, DC.

Joseph Williams, inspector, Illinois Department of Mines & Minerals, Illinois.

Members-at-Large

Maurice Fowler, director of safety (ret.), Duquesne Light, Pennsylvania.

W. Dennis Frailey, manager/corporate safety (ret.), Old Ben Coal Company, Illinois.

Charles Jones, supervisory mine inspector (ret)., MSHA, Pennsylvania.

The following nominees, representing the Holmes Safety Association, were elected to serve with those previously elected to serve on the board of directors of the Joseph A. Holmes Safety Association:

Delegates to Board of Directors, Joseph A. Holmes Safety Association

Term Expires 1983

Willard Esselstyn
James Clem
Robert Barrett

Nominees 1982-1984

Edward Onuscheck
Walter Vicinelly
William Hoover

Committees Appointed by President-Elect C. William Parisi--1982-1983

Finance-Auditing Committee

John Miller (Chair)
Herschel Potter
Robert Vines

Nominating Committee

Harry Thomspon (Chair)
Earle Rudolph
David Hazlett
John Takacs

Merit Awards Committee

Robert Barrett (Chair)
William Hoover
John Miller

Incoming president, C. William Parisi presented the outgoing "President's Award" which was accepted by Joseph Taylor on behalf of Willard Esselstyn.

An outstanding and enlightening slide presentation of the mining operations of the Carbon County Coal Company, in Hanna, Wyoming, was presented by Steve Lipe, safety director.

Twelve delegates from various geographical areas were called upon for brief reports of HSA activities within their chapters and district councils.

Secretary Hoover was invited and accepted to address the U.S.W.A. and the U.M.W.A. at later dates by safety directors Harry Tuggle and Joseph Taylor.

A special thank you to the following sponsors of the hospitality room on Monday and Tuesday evenings:

Joseph A. Holmes Safety Association, Arlington, Virginia;

Fairchild, Incorporated, Beckley, West Virginia;

National Mines Service, Indiana, Pennsylvania; and,

Pennsylvania Bituminous Council, Hastings, Pennsylvania.

Also to the Duval Corporation of Tucson, Arizona for the coffee provided during the sessions.

It was moved and carried that a contract be drawn up with management of the Quality Inn/Central to hold the 1983 annual meeting approximately the same time, date, and location.

Secretary's 1981 Progress Report

The Holmes Safety Association, in its 60th year of service to the industry, being noncommercial in character, is still expanding with the initial support of all five segments of the mineral extractive industries. The Association's responsibility to research, prepare and distribute monthly job-related safety topic materials to chapter mines for use at on-the-job safety meetings continues by demand to be one of the most important factors.

The 230 new safety chapters and two district councils, in Kemper, Kentucky, and New Iberia, Louisiana, established during 1981 again indicates the cooperation, hunger and concern for safety within the mineral extractive industries.

The National Council is now servicing four state councils, 46 district councils and 1,727 safety chapters, with more than 245,000 members, located within 44 mineral industry states, plus the provinces of British Columbia and the Yukon Territory of Canada.

The location for new chapters for 1981 are as follows: West Virginia, 108; Kentucky, 35; Virginia, 16; Colorado, 12; Wyoming, 10; Maryland, 7; California and North Carolina, 6 each; Pennsylvania, 5; and New Mexico and Alabama, 3 each. The remaining 19 chapters were formed within 14 other states.

Chapters reported to the Denver, Colorado, computer center 98,773 safety meetings with 1,305,501 members attending. State and district councils held 113 safety and/or safety dinner meetings with 5,804 industry members present.

The National Council officers and executive body wish to extend their appreciation to all in the industry for their outstanding and continuous participation in holding and reporting safety meetings.

The Holmes Safety Bulletin is unique in providing a regular source of readily available safety and health topics especially designed for use at on-the-job safety meetings.

The Holmes Safety Association has practically covered the four corners of this nation in its efforts to reach industry with its safety concepts. If we have not reached your mining operation, please let us know. We are only a telephone call away, ready to listen, and always open for suggestions.

It is very important to remember that the safety chapter is the heart and life of the Association, and only at this grass-roots level with the worker and supervisor can we succeed. This is where the danger and exposure exists and these are the most important people we must reach with safety training and educational programs.

We wish to express our appreciation to all in the industry for its initial support. Let's drive for a productive accident-free year. Follow safety through in 1982.

FOLLOW SAFETY
THRU in
-82- MSHA

July 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
Subchapter N--Metal and Nonmetallic
Open-Pit Mines
Part 55.16--Materials Storage and Handling

Our discussion today, will deal with the Federal standard for the storage and handling of materials in each open pit metal and nonmetal mine which is subject to the Metal and Nonmetallic Mine Act of 1977. All of the standards listed below are mandatory standards and were taken from the Federal Code of Regulations, Part 55.16, dated January 1, 1980. These standards are for the purpose of promoting health and safety, and the prevention of accidents. The failure to comply with these mandatory standards will result in a citation being issued to the mine operator for each offense as required by section 8 of the Act.

55.16 Materials Storage and Handling

55.16-1 Supplies shall not be stacked or stored in a manner which creates tripping or fall-of-material hazards.

55.16-2 (a) Bins, hoppers, silos, tanks, and surge piles, where loose unconsolidated materials are stored, handled or transferred shall be--
(1) Equipped with mechanical devices or other effective means of handling materials so that during normal operations persons are not required to enter or work where they are exposed to entrapment by the caving or sliding of materials; and
(2) Equipped with supply and discharge operating controls. The controls shall be located so that spills or over-runs will not endanger persons,

(b) Where persons are required to move around or over any facility listed in this standard, suitable walkways or passageways shall be provided.

(c) Where persons are required to enter any facility listed in this standard for maintenance or inspection purposes, ladders, platforms, or staging shall be provided. No person shall enter the facility until the supply and discharge of materials have ceased and the supply and discharge equipment is locked out. Persons entering the facility shall wear a safety belt or harness equipped with lifeline suitably fastened. A second person similarly equipped, shall be stationed near where the lifeline is fastened and shall constantly adjust it or keep it tight as needed, with minimum slack.

55.16-3 Materials that can create hazards if accidentally liberated from their container shall be stored in a manner that minimizes the dangers.

55.16-4 Hazardous materials shall be stored in containers of a type approved for such use by recognized agencies; such containers shall be labeled appropriately.

55.16-5 Compressed and liquid gas cylinders shall be secured in a safe manner.

55.16-6 Valves on compressed gas cylinders shall be protected by covers when being transported or stored, and by a safe location when the cylinders are in use.

55.16-7 (a) Taglines shall be attached to loads that may require steadying or guidance while suspended.

(b) Hitches and slings used to hoist materials shall be suitable for the particular material handled.

55.16-8 (reserved)

55.16-9 All persons shall stay clear of suspended loads.

55.16-10 To protect personnel, material shall not be dropped from an overhead elevation until the drop area is first cleared of personnel and the area is then either guarded or a suitable warning is given.

55.16-11 Employees shall not ride on loads being moved by cranes or derricks, nor shall they ride the hoisting hooks unless such method eliminates a greater hazard.

55.16-12 Chemical substances, including concentrated acids and alkalies, shall be stored to prevent inadvertent contact with each other or with other substances, where such contact could cause a violent reaction or the liberation of harmful fumes or gases.

55.16-13 Suitable warning shall be given before molten metal is poured and before a container of molten metal is moved.

55.16-14 Operator-carrying overhead cranes shall be provided with:
(a) Bumpers at each end of each rail;
(b) Automatic switches to halt uptravel of the blocks before they strike the hoist;
(c) Effective audible warning signals within easy reach of the operator;
(d) A means to lock out the disconnect switch.

55.16-15 No person shall work from or travel on the bridge of an overhead crane unless the bridge is provided with substantial footwalks with toeboards and railings the length of the bridge.

55.16-16 Fork and other similar types of lift trucks shall be operated with the--
(a) Upright tilted back to steady and secure the load;
(b) Load in the upgrade position when ascending or descending grades in excess of 10 percent;
(c) Load not raised or lowered enroute except for minor adjustments· and

(d) Load-engaging device down-grade when traveling unloaded on all grades.

55.16-17 through 55.16-34 (reserved).

Clarification of 55.16-16 Operating Fork Lift and Similar Type Lift Trucks

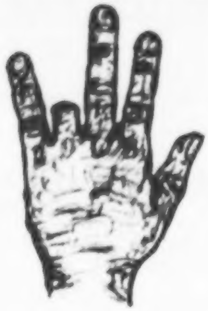
This standard is intended to insure that safe lift truck operating procedures will be used at all times.

The requirement that load engaging devices be placed in a down-grade position when traveling on all grades reflects the accepted safety practice of traveling or tramming with the load-engaging mechanism as low as possible. This practice is set forth in Chapter 22, Powered Industrial Trucks, Industrial Safety, published by the National Safety Council and is also a requirement of the Occupational Safety and Health Administration, standard 29 CFR 1910.178(n) (i), (ii), and (iii). In most situations when tramming without a load, the load-engaging mechanism should be kept as close to the ground as safety permits. However, in situations where adjustments will be necessary to facilitate safe operation of the vehicle (e.g., when traveling on inclines, declines or over rough terrain), the load-engaging mechanism may be adjusted enroute.

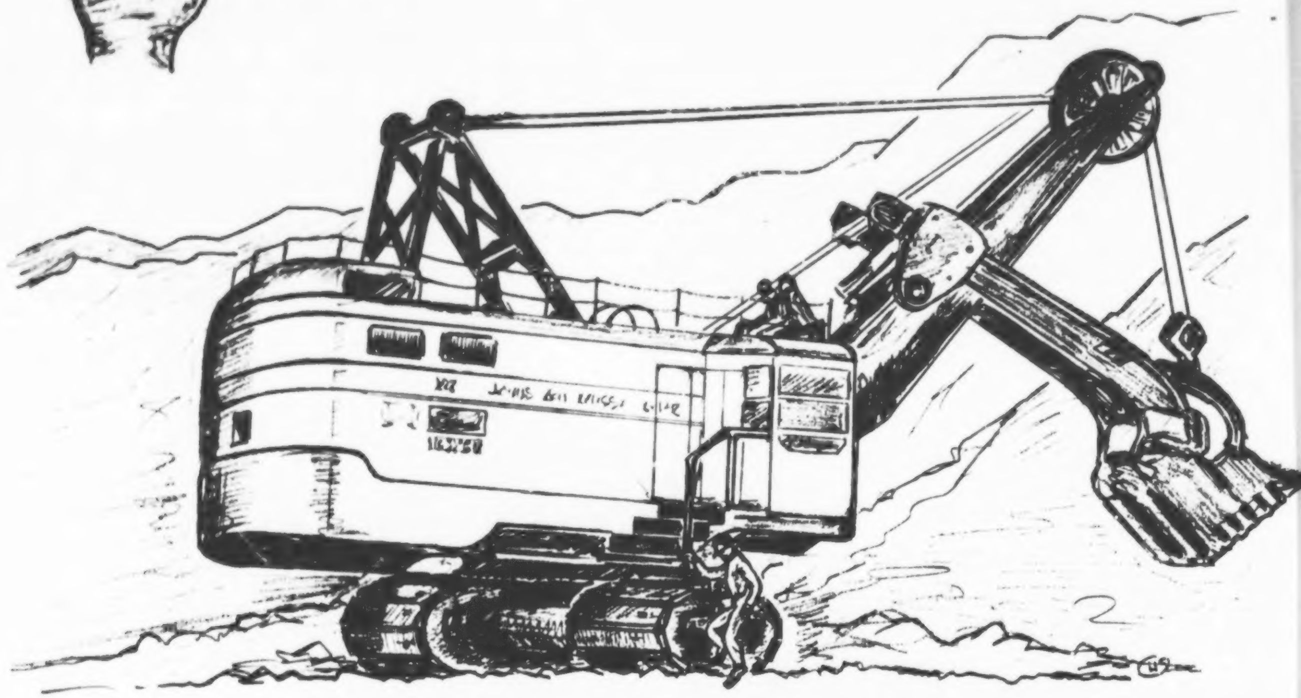
"SAFETY"
It's Up to You,
In '82

MSHA

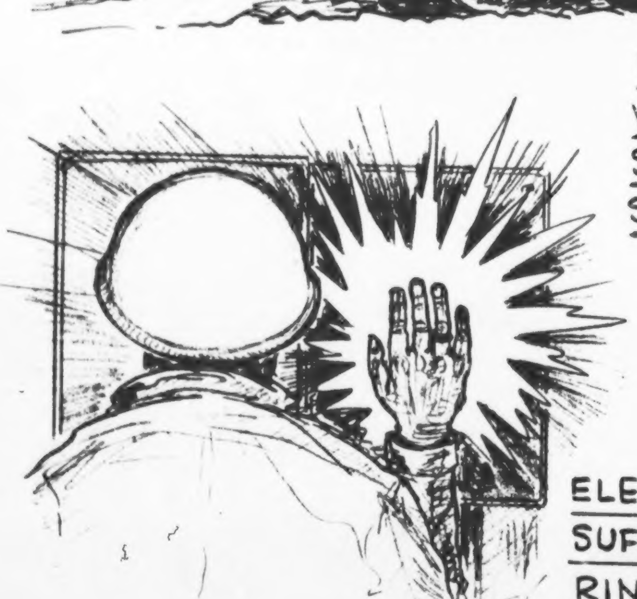
RINGS ARE A HAZARD AT WORK



MANY MINOR INJURIES TO FINGERS BECOME AN AMPUTATION DUE TO A RING BEING INVOLVED



IN CLIMBING DOWN FROM SHOVEL WORKMAN PLACED HAND ON BOTTOM STEP. RING CAUGHT ON EDGE OF STEP RESULTING IN AMPUTATION



ELECTRICIAN WORKING ON PANEL SUFFERED A SEVERE BURN WHEN HIS RING CAUSED A SHORT AND MELTED

FOLLOW SAFETY
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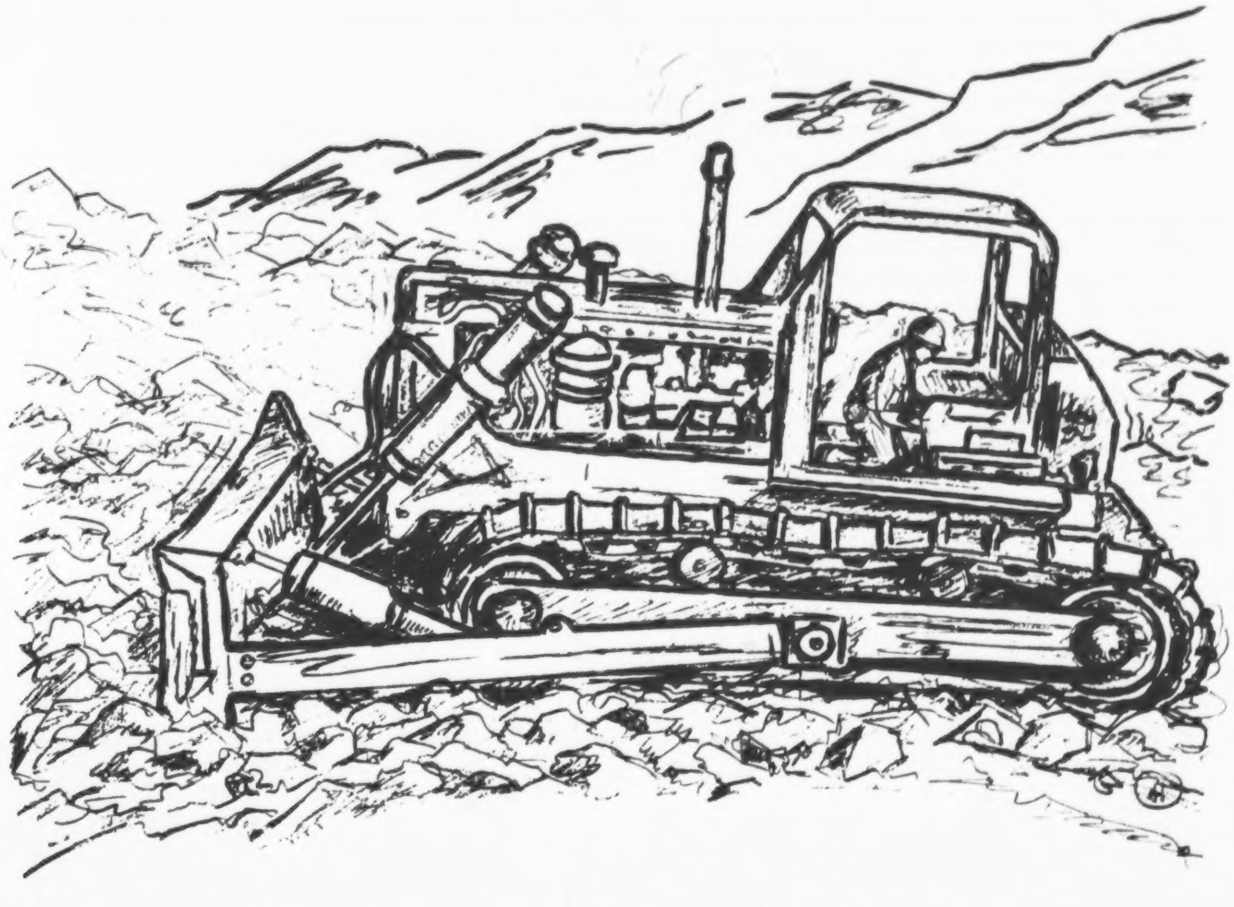
NEVER WORK ON RUNNING MACHINERY



__WARNING__ — ALWAYS TURN OFF MACHINERY TO CHECK OR MAKE REPAIRS

__NEVER__ PLACE YOUR HANDS IN UNLIT AREAS WITHOUT FIRST CHECKING WITH A LIGHT TO MAKE SURE YOU WON'T BE CAUGHT!

ABSTRACT
FROM
FATAL ACCIDENT

July 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Underground Accident

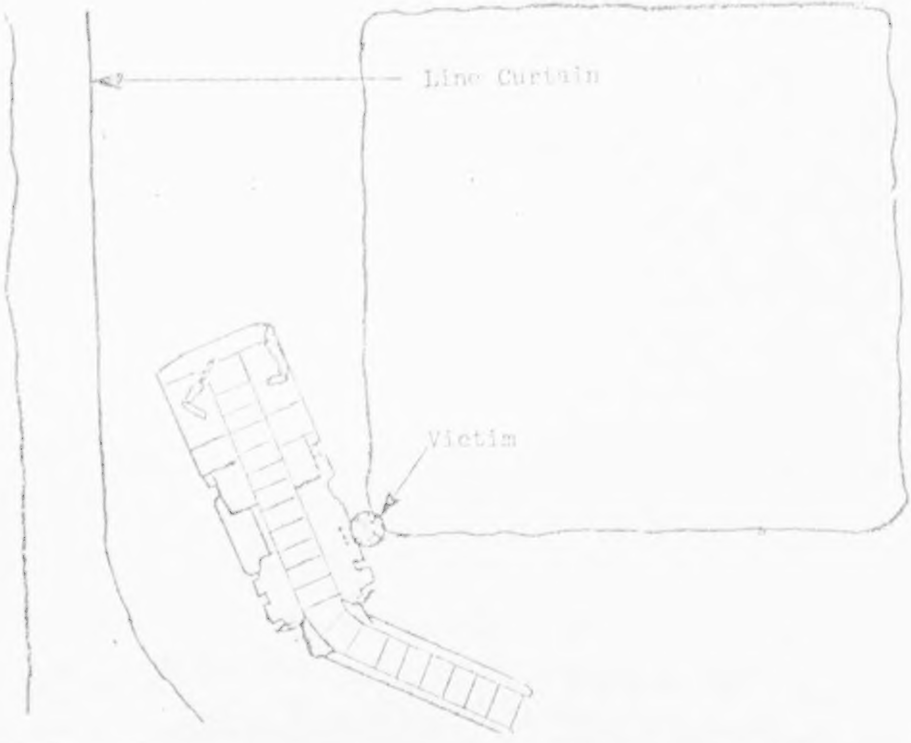
General Information: A loading machine operator was fatally injured when he was crushed between the rib and the loading machine. He was operating at the corner of the second open crosscut outby the face in [illegible] entry. The victim had about four years of experience.

Description of Accident: The victim loaded the coal in the entry and then started to tram the loading machine to another entry. Another loading machine operator was sitting at the shuttle car spot across the crosscut through which the victim was tramming the [illegible] curtain.

The operator stated that he saw [illegible] around the corner. It stopped. After a few minutes this operator called to the victim several times but received no answer. He walked to the loading machine and found the operator pinned between the machine and the rib. He tried to move the machine in an effort to free the victim but the power was off. He summoned help and the victim was removed to the hospital where he subsequently died.

Cause & Conclusions: The victim was considered by management to be a well qualified and competent loading machine operator. The loading machine was examined by an electrical inspector and no defects were found.

It was the consensus of the miners in the accident area that the victim split the "cats" and lost control of the machine. The accident and fatality occurred due to the loader operator's failure to recognize and be alert to the inherent hazards of moving equipment.



ABSTRACT
FROM
FATAL ACCIDENT

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

FALL OF GROUND ACCIDENT

General Information: This [illegible] operation since the [illegible] fall of ground occurred in the [illegible] was approximately 8 feet high and [illegible] fall was triangular shaped and [illegible] and 42 inches high [illegible] 18 inches on one side [illegible] estimated weight of the rock [illegible] used on each side of the [illegible] stabilizers [illegible] distance of about [illegible] feet [illegible] in the [illegible] area [illegible]

Description of Accident: The [illegible] miners to drill [illegible] holes [illegible] instructed by the foreman [illegible] and drilling.

The foreman came back and [illegible] walked down the drift to [illegible] the blast. Afterwards, the men entered the [illegible] that needed scaling on the ribs and back. [illegible] a scaling bar and [illegible] the [illegible] to [illegible].

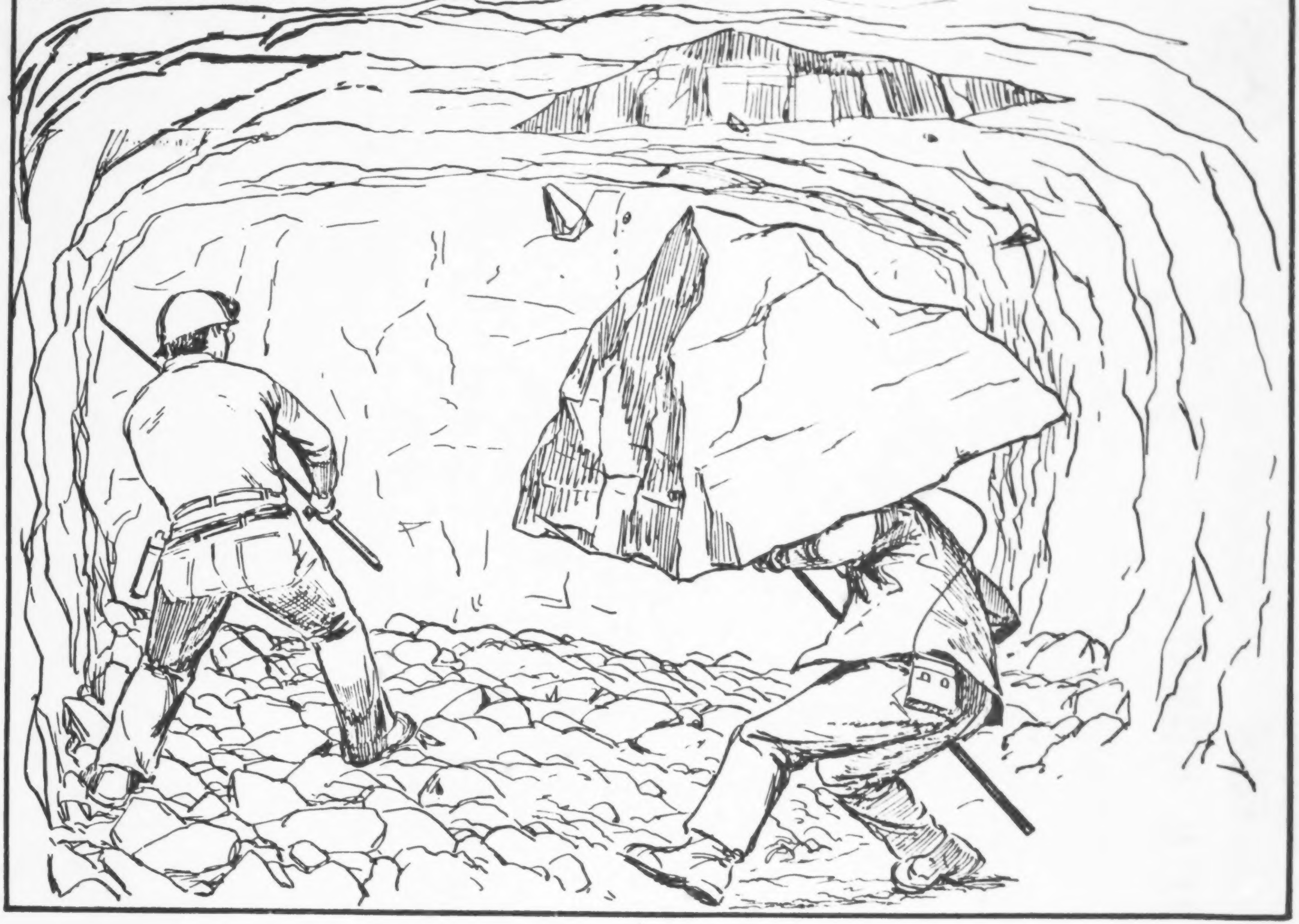
As one miner turned around to [illegible] the [illegible] he heard [illegible] say "watch." He turned and saw his [illegible] under the [illegible] rock.

Cause of Accident: The direct cause of the accident was [illegible] the mining crew and the supervisor to properly [illegible] conditions in this work area.

Contributing factors to the accident were that the [illegible] blast probably caused material in the back to become loose and several weeks had elapsed between first mining and [illegible] of the area.

It was recommended that employees should not perform their work from an unsafe location.

FATAL FALL-OF-GROUND ACCIDENT



July 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Let's Not Kid Ourselves

Safety is--

---Any one who wants to continue successfully in the mining industry, whether a supervisor, machine operator, helper, bolter, or shuttle-car operator, today needs nerve, courage, rugged tenacity, tough-mindedness, and safety mindedness and plenty of each!

Mining with safety is like riding a bicycle: either you keep moving or you fall down. To stand still is to be overrun. You've got to be willing to accept your responsibilities with safety first to fight your way to the top, or you'll never get there.

I think you have the common sense to face these facts realistically --production and safety are definitely related. I think you are shrewd enough to know that you've got to pursue both with determination. This is not cynicism; it's realism... and you know it.

If I am wrong in my judgment of you, this industry has nothing to offer you. You alone are the only one regardless of all your training and experience that can help yourself.

That's right. A safety program that gets results is one that is aggressive and tough-minded with safety.

What do I mean by realistic? I mean that, even after several hours, set days of training, or years of experience, you should sway your thinking to ask: how am I going to do this job more safely?

There you have an example of realism. It's strong medicine, but it should be accepted by everyone. Yes, every one can profit from their job if he or she understands and accepts that production with safety go hand-in-hand.

You see them all around you, every day...smart, ambitious people who have no idea what it takes to make a real success of production with safety. They are content to be polite to the boss, master a few "operating skills" such as operating a piece of equipment, or to be a production leader, without concern for safety. They believe that these alone will win them recognition, with a higher paying job.

Well, it just doesn't work that way.

Equipment and job operating skills are important, true.. but safety must be your first consideration.

The stakes are high; the reward can be sweet. But it takes courage and boldness to work underground in this great advanced mechanical age. And, you must be capable to recognize the dangers and the hazards that are combined with this occupation.

You must be willing to learn not only your job position but how to make hard decisions when circumstances demand it. You must be willing to learn how to say "no" to just production, when it should be more comfortable to say production with safety "yes"?

The question is: Are you willing to seize every opportunity to say---safety should be my first consideration.

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Swimming Pool Safety

Do you like to sit in the backyard in your favorite chair next to a pool of water, basking under the sun and sipping a cool drink? If so, your family may be among the millions in this country who own either an in-ground, above-ground, or wading pool.

While for most families this luxury of backyard pools provides a new and delightful experience, for some it has unfortunately proved to be a disaster. Last year hundreds of people drowned in a neighbor's pool.

Many of the victims of swimming pool drownings are children under five years of age, yet anyone is a potential victim. A small amount of water caught in the windpipe can trigger a series of events which can lead to unconsciousness in less than a minute and death in less than five minutes. Because of this, not only swimming and wading pools are dangerous, but a bathtub, well, cistern or cesspool, pond, or bucket of water can be the site for a drowning.

Drowning accidents need never happen. They could be prevented in nearly all cases. There are several ways to prevent these accidents. First of all, make sure that the fence surrounding the pool is adequate to keep trespassers from your backyard water areas; secondly, provide qualified supervision for children; and thirdly, make sure all family members learn to swim and know some basic rescue techniques.

If you can afford a backyard pool, then you should make sure that it has adequate safeguards for your family and the neighbors. A fence that can't be hurdled or easily climbed should be constructed around in-ground, above-ground, and wading pools. Some fences are easy to climb, such as a basket weave fence, and are no deterrent for curious, energetic children. Gates and doors should have self-closing and self-latching mechanisms placed out of reach of children.

Other supplementary protection devices and safeguards are such items as pool cover, alarm systems to warn of intruders in the water, floatlines, depth markings, and rescue devices.

Qualified supervision is another factor necessary to prevention of home drownings, especially for children under five years of age and nonswimmers. Constant supervision is essential; sporadic spot checks on children swimming or playing near the water is not enough. When pools are not being used, their gates should be locked. Small plastic pools should be emptied and turned over when not in use. Even a few inches of collected rainwater in one of these pools could cause a drowning.

As many as possible in your family should learn mouth-to-mouth resuscitation. This method is the easiest to learn and the most effective method of revival for a drowning victim. The life of a person in nearly all cases is dependent upon the speed with which a family member, neighbor or bystander reacts to give mouth-to-mouth resuscitation. Very seldom will there be a doctor near a home pool who could reach the drowning victim in time to save his/her life and, even then, the treatment method would be essentially the same unless special equipment is at hand.

If you use a public swimming facility you would expect it to have constant, qualified supervision, to be safely designed and to have rules enforced concerning safety. Your pool at home should be no different, but the safety of the users is your responsibility. Make it known that safety rules will be enforced at your pool, or otherwise the privilege of use will be withdrawn. You may be liable for the safety of anybody, invited or not, who uses your pool. You might help to discourage clandestine swimming and enhance neighborhood relations by setting regular hours for neighborhood swims, but make sure all minors are accompanied by a parent.

Drownings can happen anywhere, even at home. You may wish you never had a swimming or wading pool in your backyard--unless you take precautions and are aware of your responsibility for the safety of your pool. Make backyard swimming at your home a healthy, enjoyable, and safe pastime.

July 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

A Meaning of Safety

S - is for SOUND JUDGMENT. This is a must in any accident prevention program. Do not burn steel without wearing proper goggles. Do not work on moving equipment. Use good sound judgment, and you will come out on top.

A - is for ALWAYS. You must think and keep safety with you alway. This cannot be a part-time thought--it must be with you 24 hours a day, 7 days a week. Letting it out of your mind for as little as 10 seconds could be fatal.

F - is for FORESIGHT. You must think of what you are preparing to do; think the job through to the end. Check and be aware of possible hazards involved. No one takes a blueprint and starts building without studying it and understanding the end results. The same applies with any job and safety. You have to know where you are going, so use a little foresight, and do it safely.

E - is for EXTREME CAUTION. You must use extreme caution all the time--both on and off the job. If you are not cautious when driving an automobile, you will not be around very long. If you do not use extreme caution while on the job, serious injury or even death may result.

T - is for THINK. This one word is the answer. You must think. In some states years ago, signs were put along the highway where lives were lost in traffic accidents. These signs had one word on them--THINK. They were put there in an attempt to help reduce accidents, but the idea had to be abandoned due to the fact that some places became overcrowded with signs.

Y - is for YOU. It is up to you. You are the one who has to use SOUND JUDGMENT. You have to keep safety with you ALWAYS. You have to use FORESIGHT. You must use EXTREME CAUTION in everything you do. You have to THINK. You do simply nothing without thinking, so why not think a little for safety. The Mine Manager, the Superintendent, and the Safety Director can only attempt to help you be safe. They cannot make YOU. When the time comes, it is up to you to act in a safe manner. Always remember--do it right, you win; wrong, you lose.

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AUGUST 1982

HOLMES SAFETY ASSOCIATION
SAFETY EFFICIENCY
MINERAL INDUSTRIES

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

in this issue....

August 1982

1. Safety Topic, "What Workers and Bosses Want"
2. Safety Topic, "Safety Questions"
   "Safety Is a State of Mind"
3. Safety Topic, "Safety-Both On and Off the Job"
   Choking Emergencies
   Safety at Home
   Unavoidable Accidents
   Avoid Falls
   Health and Safety Go Hand in Hand
4. Safety Topic, "The Triple Impact of Motivation"
5. Safety Topic, "Blasting Caps"
6. Safety Topic, "Handling Explosives and Detonators"
7. Safety Topic, "Danger, Blasting!"
8. Abstract, "Explosives Accident"
9. Abstract, "Explosives Accident"
10. Safety Topic, "Report All Accidents"
11. Safety Topic, "Can a Safety Meeting Be Anti-Safety?"
12. Safety Topic, "Supervisory Attitudes Toward Safety"
13. Addresses/Telephone Numbers--Holmes Safety Association
14. Meeting Report Form (chapters only)

Correction: Harry Tuggle, Safety Director, United Steel Workers of America was inadvertently left off the list of Executive Committee members in the July Bulletin "Highlights".

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

What Workers and Bosses Want

I WANT A BOSS

Who had something to do with hiring me and who wants me to work.

Who helps me when I am new to get acquainted with my job.

Who explains to me just what my job is--just what I am expected to do.

Who tells me often how I'm getting along--what I do well and what I don't do well--who shows me how to do better.

Who not only thinks of me for what I am but also for what I may become.

Who takes a personal interest in me and my problems.

Who listens to my ideas for making the job easier and better.

Who has something to do with my pay and does it when the time comes.

Who stands up for me when I am right.

Who is honest with me.

Who tells me about changes before they are made.

Who has a personal faith and confidence in me.

I WOULD DO MY BEST FOR A BOSS LIKE THAT!!

I WANT A WORKER

Who likes the job.

Who knows the job.

Who stays physically fit.

Who wants to do a day's work for a day's pay.

Who wants to get ahead.

Who is always on the job unless excused.

Who is cheerful--not sullen.

Who works safely--with due consideration for everyone else.

Who enjoys getting a job done well.

Who tries to avoid waste and cut costs.

Who looks for a better way to do the job.

Who tells the truth; who is sincere.

Who gripes little and looks ahead.

Who keeps a spirit of team work.

Who asks questions when uncertain.

Who is willing to face personal problems squarely.

Who knows what it must feel like to be in another person's place at times.

Who feels that a job is a privilege and not a right.

I WOULD GIVE A WORKER LIKE THAT MY BEST ATTENTION!!

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Safety Questions

1. Are workers' minds any different today than they were 50 years ago?

2. Are you using the attention-getting factors that work?

3. How do you know when a worker is sold on safety?

4. Why must you be part psychologist, part educator, part engineer, and part salesperson to be a good supervisor?

5. How can you put your ideas across painlessly?

6. What are some of the qualifications of a good safety person?

Do you find it curious to suggest that you must be part psychologist, part educator, part engineer, and part salesperson in order to be a good supervisor. I believe you must possess these characteristics for the following reasons:

A psychologist because you must understand human nature since you are working with people. An educator because you must teach. An engineer because you must know how machinery and equipment work. A salesperson because you must put your ideas across to others.

If you are strong in each of these characteristics, your job as a supervisor will be so much easier.

Your attitude as a supervisor will determine, to an extent, how your safety messages will be received. Some suggestions follow.

1. Don't try to exaggerate your importance. Walk, do not strut.

2. Encourage the employees to ask questions even if they seem repetitive or obvious.

3. Don't worry about being the "boss." Keep communications lines open between yourself and your employees.

4. Don't hesitate to praise an employee for taking the proper safety steps.

5. Recognize each employee as an individual and treat them accordingly.

6. Try to keep workers informed regarding company procedures. An employee who feels a part of the company usually has better morale.

7. Explain to your workers the reasons why behind things. A natural curiosity is healthy.

8. Encourage social contacts with and among workers. Employees that know each other will work together better.

Remember, in order to give good safety advice, it must be good advice. You must also consider your audience and target your speech to them.

★★★★★★ Safety Is a State of Mind ★★★★★★

Safety is a state of mind. If your mind is on matters at home or if you are wondering how much work John Doe is doing, you cannot be doing your job safely. A main concern of workers today seems to be: "Am I the only one working right now? Where are the rest of the workers? I wonder what everyone else is doing?" This is about the time that you hit your finger with a hammer or maybe roll a set of car wheels on your foot.

If our minds are wandering, we are not doing our best work and this means we are not working safely. Both mean that we are not an asset to our employer. We may even wind up in a hospital bed or if we are lucky with just an uncomfortable cut or bruise.

So, what should we do to be at our best safety-wise? First, fully understand the job and know how it can be done with the least danger of injury to ourselves. If someone else is working with you, be sure each one knows what the other is going to do as part of the job. Do it with a desire of accomplishment; don't just shove your end into place and let your partner struggle.

Don't leave a job half finished unless you know it will be safe, even though you might not get back to it immediately.

The best safety measures are in knowing your job, cooperating with everyone else concerned, and having consideration for others. Practicing these, we should be able to avoid all accidents.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

SAFETY-Both On and Off the Job

★ CHOKING EMERGENCIES

Choking emergencies require prompt but thoughtful action if the stricken individual is to be saved. Such an emergency permits a very limited time for taking the necessary lifesaving actions--usually only from two to eight minutes.

Since a person having a stroke or heart attack can usually speak if conscious, a choking seizure can in most cases be recognized by the inability of the stricken individual to speak or breathe.

What should a witness do?

Of course, appeal orally for assistance by any doctor, dentist, or nurse who might be in the vicinity of the choking person. This is particularly important since many choking seizures require emergency surgical action to make it possible for the victim to breathe, as the obstruction may be too far down to permit manual removal.

If no medical personnel are present, one of the following emergency actions should be initiated at once:

First Method--(An emergency method, recommended by Dr. Heimlich of Cincinnati, that has actually saved lives.)

The rescuer should stand behind the victim and put both arms around the victim just above the belt line, allowing the head, arms, and upper torso to hang forward. Then, the rescuer should grasp his/her own right wrist with the left hand and rapidly and strongly press into the victim's abdomen, compressing the lungs, and expelling the obstructing bolus.

Second Method--(Recommended by Drs. Haugen and Eller of Ft. Lauderdale, Florida.)

Put the victim's head back and open the mouth. Pull out tongue with a napkin. (Often this alone will dislodge the object.) If the object can be seen in the throat, reach down the side of the throat with one finger and try to flip it out. If if cannot be dislodged in this manner, use tongs or a long spoon, being careful not to injure sensitive throat tissues. Do not use a fork because the pointed tines could puncture membranes. Special plastic tongs designed specifically for this type of emergency are commercially available.

Third Method--(Dr. Hursh, Director of the University of Illinois Health Service, suggests the following method.)

1. Place an immediate call to the police, who will in turn obtain an ambulance.

2. While awaiting the ambulance, place the patient face down on a table. Move the patient forward off the table until the trunk bends at the hips. At this point the head should be near the floor. Strike the back forcefully to dislodge the food causing the obstruction.

Don'ts For Choking Victims--

1. Don't give artifical respiration or oxygen. The windpipe is blocked by the obstruction like a cork in the throat of a bottle. Neither air nor oxygen can get past the obstruction.

2. For the same reason, don't give water -- water will not pass the obstruction.

3. Don't depend upon an ambulance or rescue vehicle to arrive in time. Death can occur in less than eight minutes.

4. Don't just stand there. Get the object out.

★ SAFETY AT HOME----

Are you doing everything you can to keep your own family safe from accidents. The five leading causes of deaths from home accidents are falls, fires, suffocation, poisoning and firearms.

If you can answer yes to the following questions, your home is relatively safe from serious accidents.

1. Do you have non-skid mats in your bathtub or shower?

2. Is your home wired to safely handle all the electrical appliances you use?

3. Are your stairway runners securely tacked down?

4. Do you have the proper type of fire extinguisher in your kitchen?

5. Do you keep front and rear steps free of ice and snow?

6. Do you insure that power tools are properly grounded before using them?

7. Do you wear safety goggles when using power tools in your home workshop?

8. Do you observe all of the safety precautions when operating power lawn mowers and snow blowers?

UNAVOIDABLE ACCIDENTS----

How many accidents do you think are really unavoidable? Consider this:

A man working in a large industrial plant had removed a guard from a machine to do some oiling. The oil can he was using had a long spout for getting into the more remote parts of the machine. While he was oiling the machine, the guard he had removed fell over, struck the oil can, and knocked the spout over so that it cut an ugly gash across the man's right eyebrown, just missing the eye itself.

Later this man was in the emergency hospital room receiving treatment for the cut. He spoke about the accident to the nurse who was attending him.

"You know," he said, "that was an unavoidable accident. You can talk safety as much as you please, but there are always unavoidable accidents and this was one of them."

The nurse asked, "Do you mean that you are going to let that same thing happen again?"

"No," answered the man. "It will never happen to me again."

"But how will you avoid it?" she asked.

"By laying the guard in another position," was the answer.

So this man, who began by proclaiming this to be an unavoidable accident, concluded by explaining just how it might be avoided.

Keep in mind two things about unavoidable accidents: 1) Accidents for which we are to blame, we want to call unavoidable; and 2) ninety percent of unavoidable accidents are really preventable.

AVOID FALLS----

Are you aware that your landing impact in an ordinary fall is almost as great as the landing impact of a paratrooper who has parachuted from a plane 30,000 or more feet in the air?

Paratroopers receive months of intensive training on how to hit the ground correctly and safely at their ordinary landing speed of 14 miles per hour. This landing speed is approximately the same, whether they jump from a height of 10,000, 20,000 or 30,000 feet.

Paratroopers know that the hazard is not in the fall--but in the landing. The shock of landing at 14 miles an hour is still their greatest hazard. The same hazard applies to any type of fall--at home--or on the job. It's not the fall--it's the landing.

In the one second that it takes from the time you start to fall until the time you land, your landing speed can be a bone-shattering 11 miles an hour.

Think of it! Every time you run the risk of falling, you are taking almost the same chance as a paratrooper jumping from an airplane thousands of feet in the sky. That is why it pays to use hand rails while climbing or descending stairs. Stay inside designated walkways. Use safe and approved ladders and scaffolding. Avoid short cuts. Walk to your destination--never run.

Why expose yourself to injuries that can result from any fall? Practice all safety rules and procedures and remember, whenever you are tempted to take a chance always bear in mind that a one second fall is practically the same as falling thousands of feet by parachute. Why take a chance on slipping, tripping and falling?

HEALTH AND SAFETY GO HAND IN HAND----

Prescription for health and longevity:

1. Do things gradually but permanently. In seeking fitness, train don't strain. Become fit and healthy over years, not overnight. Exercise a little every day.

2. Your feet are the foundations of your health. Wear comfortable shoes.

3. Eat to live, don't live to eat. And eat only when you are hungry. Be selective in your food shopping.

4. Always, especially when trying to lose weight, make breakfast your biggest meal and taper off for lunch and dinner. You should be hungry at bedtime.

5. Go to sleep when you are tired. Always get adequate rest.

6. If you feel like a drink before dinner, resist the urge. Wait it out and you'll be further down the road to positive health.

7. Find ways to test your level of health so that you can get satisfaction and motivation for further efforts. Lowering your pulse is one way to check fitness. Of all health indexes, fitness is best.

8. Simplify your life as much as possible.

9. Sing and whistle when you can; these are good for the soul.

10. Dance!

11. Tell and show love and appreciation.

12. Be thoughtful, thankful and kind.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Triple Impact of Motivation

One of the biggest problems facing management today is the motivation of employees to higher production goals. And the principal reason it remains a problem is because too many supervisors and other executives think that "motivation" is just a synonym for "incentive" or "award."

Actually, employee motivation is both impractical and impossible without true understanding and empathy.

It is a simple psychological fact that the average employee, no matter what position or job he or she holds in the organization probably acts like the kind of person he or she thinks they are.

It is impossible for a person to act otherwise, no matter how much will power is exercised. The person who thinks of themself as a "failure" will inevitably fail, regardless of how hard they try to succeed. For example, a production worker with a low self-concept is so convinced that he cannot remember and follow safety procedures that he unconsciously creates the conditions necessary to bring about an accident. This is just one cycle in a destructive downward spiral many an individual follows.

This is basic: a person's personality consists of numerous ideas which are more or less consistent with each other. Any single idea which doesn't agree with this consistent group will be rejected. And at the center of all these ideas which form a human personality is the person's concept of themself, a unified, well-crystallized set of propositions which form the self-identification.

It is as though this self-concept forms an invisible ceiling that stops the person from attempting to rise or progress.

If the self-concept is essentially negative, every decision made must necessarily filter through motivational blocks and memories of past failures. Such a person is burdened with doubt; convinced they are not entitled to much and not capable of much, so they never reach for anything higher.

When a self-motivated supervisor helps an employee burdened with low self-esteem to set high goals and when the employee converts all of these goals into short affirmations that are repeated, in the present tense, over and over every day, eventually that employee will change his or her self-image.

The former low opinion will be replaced by confidence and self-assurance. These positive affirmations soon become internalized. They become a characteristic way of responding to life and interpreting experience.

If an employee is fortunate enough to be associated with a motivated supervisor, it is inevitable that the employee will learn to think the wholesome, positive thoughts of strong and healthy people and begin to grow in this image. Instead of concentrating on problems, the employee will begin to look at solutions. An attitude will develop of positive expectancy; each day will be started without giving mental recognition to the possibility of defeat. Low self-concept will become a thing of the past--not immediately, but eventually and inevitably.

No one really enjoys failure. Yet, remembering past failures is so common among so many people that an unbiased observer might mistakenly think they do enjoy it. The all-too human experience of attempting something and failing to accomplish it should be relatively unimportant.

Such experiences become significant only when they become so strongly entrenched in memory that they create a motivational block.

A common example could easily be found in the game of football, or any participation sport. If a man in his youth tried to play football and failed, even though this failure may be subjectively defined by him, he may develop an aversion to football in general that has no basis other than his imagined failure.

A similar block may have its origin in something as unimportant as forgetting a speech in a high school play. The person who holds this inhibition relives his or her youthful experience as vividly as though it happened yesterday. Consequently, although several decades may have passed, there is a refusal to make even the simplest comment from a public platform. An unimportant failure is relived every time the situation comes up.

Negative thinking can be reduced and more often than not, completely eliminated by stressing the following points of self-discipline:

--Minimize past failures.

--Reinterpret failures maturely.

--Accent past successes.

--Bolster your own ego by believing in yourself.

--Set reasonable goals that are attainable.

--Share responsibility.

--Be ready to help. Every time you help someone else, you help yourself.

--Looking backward to re-experience failure is a strange but not uncommon quirk of human nature that inevitably interferes with an employee's maximum use of potential. Employees should learn to motivate in the present tense.

A good rule for a consistently progressive life is: "Don't ever look back . . . unless you plan to go that way."

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Blasting Caps

An article in a newspaper carried the headline "Boy Injured by Blasting Cap." The article contained the story of a 15-year-old boy suffering injuires to his eyes and face as the result of an exploding blasting cap with which he was playing. Pieces of the cap were embedded in the face of the youngster and the possibility existed that the boy would loose his sight in one of both eyes.

What comes to mind immediately is, "How did the youngster come into possession of the blasting cap? Was the cap carried home from a mine by one of his relatives, or did he come upon it at some nearby mine site while wandering around the countryside?"

If the blasting cap was carried home for some purpose by a relative, that individual is now suffering for being instrumental in the injuries to the youngster. No one wants to feel responsible for an injury to another person, expecially a youngster with a life time to lead. As miners, we are aware of the hazards of blasting caps and handle them accordingly, but young persons do not ordinarily know these dangers. They can become innocent victims of some other individual's neglect.

If this youngster found the blasting cap at a nearby mine, either at an unlocked storage magazine or lying loose in the area, then the individuals at the mine are guilty of neglect and are indirectly responsible for the injuries to the boy.

Perhaps the blasting caps were left lying around on outside construction jobs and the youngster just wandered upon them. But one thing remains. However they were obtained, this accident would have been avoided if the blasting caps were stored in their proper containers. Do not be responsible for the creation of a situation that could lead to an injury for any person.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Handling Explosives and Detonators

Don't hesitate to take a second look and size up our work habits and attitudes regarding each job that has built-in hazards. An example is blasting. All of us are not shot firers; however, we should be familiar with the safe practices involved in handling explosives.

We know that explosives have a terrific force, but are we aware that there is a tendency to develop careless habits that could lead to tragic results? Have any of you ever wondered just how powerful explosives are? Roughly, a cubic inch of powder has the potential energy to lift 1,000 pounds to a height of 1 foot. And electrical blasting caps are extremely sensitive to electrical current or shock. Generally, an electrical current is used to heat the wire bridge in the blasting cap like the filament in a lamp, which in turn starts a chain of charges leading to a blast sufficient to initiate the detonation of a primer cartridge. A few good flashlight batteries can supply the electrical current needed to detonate a blasting cap, so we must keep strict control over these helpers which provide a combination of brute strength and a quick temper.

Keeping control is no secret. We must protect powder and caps from the dangers of falls of roof or ribs and isolate them from electricity or stray currents. For this we have special magazines, built substantially and with nonconductive material, to keep them enclosed and separated. Place the magazines in an area free from travel of equipment and sufficiently away from power conductors. Magazines are to be used only for the separate storage of the cartridges and caps which should be kept in their boxes in the magazines so we can easily arrange to make our old stock accessible for use first. Empty cases should be taken from the mine and destroyed on the surface.

When explosives and detonators are needed they are to be carried separately in specially built nonconductive containers. Be sure the containers are closed to prevent loss of an item that could become an instant booby trap. Explosives and detonators should be kept separate at all times until used. At the end of the shift, all unused explosives and detonators should be returned and enclosed in their respective magazines.

We must handle explosives and detonators carefully at all times and protect them from fire, flame, or sparks and keep them from contact with electrical currents or charged surfaces.

Remember, a wrong move in the handling of explosives could be your last move.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Danger, Blasting!

Concussion, flying rock, and noxious gases that result from blasting are dangerous; any one of these can cause serious or even fatal injuries if the conditions are right. Everyone working in an open-pit mine must be completely familiar with company rules and procedures concerning blasting operations. Everyone should be notified of any changes in these procedures, such as a change in the time blasting in done. Remember, all it takes for an accident to happen is for someone to be in the wrong place at the wrong time!

Concussion is a factor only in large blasts. A concussion resulting from a blast in an open pit is dissipated very rapidly because of the size and configuration of the pit. However, if the blast is large, some means of protecting ourselves from concussion is necessary if we are working near the scene of the blast. The best way, of course, is to get behind something when the blasting signal is sounded and stay there until the all clear.

Familiarize yourself with the blasting signals in use at your pit. Remember, these are not universal; they will vary from one locality to another. (Supervisor: You may briefly review the blasting signals and procedures used at your operation).

Flying rock present the greatest blasting hazard in an open pit. The trend in open-pit blasting is to so control the factors when setting up a blast that "fly rock" is virtually eliminated. However, if you are working close to the blast area, guard against being injured by flying rock. Again, the best protection is to get under or into something that will protect your entire body. Use the shelters or safety zones provided. Go to them as soon as the blasting signal is sounded and stay there until the all clear. A flying rock can be compared to a bullet, with even more mass and weight; and, like a bullet can cause a serious or even fatal injury. (See fatal abstract report).

In most open pits, the possibility of injury from noxious gases generated by the blast fumes is just about nil. The fact that a pit is big and is open helps dissipate the gaseous products very rapidly. In spite of this, there may be "dead" areas where the gaseous products tend to linger. Avoid these areas until they clear or until the gases become diluted.

(Supervisor: You may add other hazards and indicate practices used at your mine for protection from blasts).

Remember, blasting injuries are usually serious. Stay alert!

ABSTRACT FROM FATAL ACCIDENT

August 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Explosives Accident

General Information: An explosives accident with a resultant fatal injury occurred when a man was buried under about 30 feet of blasted overburden. The victim was not an employee of the coal company where the accident occurred.

Description of Accident: Mining activities were proceeding normally as the blasters were loading vertical drill holes with explosives. Seventy holes had been charged. Detonation of the explosives was delayed until coal loading operations were completed in the pit below.

The maintenance supervisor instructed the mechanic to remove a water pump from the pit. After doing this, the mechanic notified the supervisor by radio that two truck loads of coal remained to be loaded. The mechanic also informed the dragline operator and the oiler of the charges to be detonated. He then proceeded to the junction of the mine access and walked to an elevated section of the road which afforded him a better view of the terrain.

The front-end loader operator brought a front-end loader out of the pit and informed the mechanic that the last truck had been loaded and would leave the pit soon. Shortly thereafter, the mechanic notified a second mechanic, by radio, that the last truck had left the pit. This information was relayed to a shooter who connected the leg wires to the blasting unit, checked the circuit, yelled "fire in the hole" and detonated the explosives.

The dragline operator and the oiler who were observing the proceedings from the dragline arrived shortly after the blast and reported that they observed a red pickup truck in the pit immediately before the blast. They assumed the truck belonged to a local resident; however, their view of the entire pit was limited and they were unable to determine if the truck left the pit before the blast.

The miners began removing the blasted material from the pit and the pickup truck was uncovered with the driver fatally injured.

Causes: The area in which charged holes were awaiting firing was not adequately guarded or barricaded and posted against unauthorized entry--a violation of Section 77.1303(g). All persons were not cleared or removed from the blasting area prior to firing explosives--a violation of Section 77.1303(h). Unauthorized persons were permitted on haulage roads--a violation of Section 77.1600(a). Standardized traffic rules, signals, and warning signs were not posted at the mine--a violation of Section 77.1600(b).

ABSTRACT FROM FATAL ACCIDENT

August 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Explosives Accident

General Information: The quarry was a multi-bench riprap and gravel quarry with crushing facilities. Ore was mined on benches up to 40 feet high that were drilled using various types of drilling patterns. Drill holes were loaded with 60 percent powder and fired with an electric blasting machine. The drill hole pattern consisted of three rows of drill holes ranging from 20 to 40 feet deep. A total of eight holes, 4½ inches in diameter, were drilled in the back row.

Description of Accident: The foreman(victim) was working his shift without incident until it was time to blast. The driller had drilled and loaded the round of the third bench of the quarry. The word was passed to take cover as the round was about to be shot. All work ceased and all employees went to take cover under vehicles parked behind the one inch gravel stockpile about 400 yards from the blast site. The company president, checking to see that everyone was under cover, noticed the foreman standing. He told him once to take cover and then again. The foreman replied with "You guys are chicken." The president could no longer see the foreman and assumed that he had taken cover. The blaster was given the all clear sign by visual contact with the president. The blaster saw no persons other than the president. He yelled "fire in the hole" and shot the round. Upon detonation, a section of the face blew out in a shotgun pattern. The flyrock went out over 400 yards and damaged machinery parked in the way.

It was determined later that the foreman left the shelter of the flatbed truck and climbed up on the far side of the one inch stockpile to watch the blast. No one had seen this. While he was standing there, he was struck in the head by an 80-pound rock blown from the blast site. He was found, after the blast, by a loader-operator.

The standard procedure for signaling before a blast was to give blasts on an air horn; however, on this day it was inoperable so hand and verbal signals were given.

Examination of the face showed that a water course ran into the face of the bench and widened out as it went in. The driller did not notice this. The water course was one inch wide and the surrounding rock was oxidized and fractured and such a piece of rock hit the victim. It can only be speculated as to why the victim left the safety of shelter and exposed himself to a danger that he was aware of.

Cause and Recommendations: The direct cause of the accident was the failure of the victim to obey an order from his superior. He recklessly exposed himself to a known hazard. A contributing factor was the fractured rock due to the water course. All employees, except for the blaster, should be evacuated from the blast area.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Report All Accidents

How do we prevent accidents and injuries? There are really only three basic ways: 1) by observing, correcting or eliminating unsafe conditions; 2) by following rules that tell you how to do your job safely and efficiently; and 3) by investigating all accidents to prevent a recurrence.

How can you help? Principally, in three ways: 1) by obeying all safety rules and regulations, and doing your work in a safe and proper manner; 2) by observing and correcting unsafe conditions, or reporting them to supervisors or the safety department; and 3) by reporting all accidents and injuries.

Accidents are considered a loss-a loss of time, production and well being. All these losses hurt. They hurt you and your job. Therefore, we must work together to prevent them from happening.

How can we do this? Only through investigation to determine the factors in each accident--what contributed to it, what caused it, and what will prevent its happening again.

In order to do this, we need an accurate description of the conditions that existed immediately before the accident. In this regard, you can be a lot of help, and you should fully cooperate in helping us to protect you better.

If you see an accident, or are involved in one, make a mental note of everything that occurred and the conditions that existed, so you will have in mind the way the place looked just before and right after the accident. These mental pictures should include your location and the location of others, what you were doing, where machinery or equipment was located, what happened, who was injured and how, how bad the injury was and where the injured person was located.

Impress these things on your memory before you talk about the accident with anyone. Others at the accident site may have seen things a bit differently because they were in a different position, or were more or less observant than you. But, if you talk first and remember later, your recollection may be confused.

Remember, the supervisor or safety engineer who investigates is not trying to place blame but merely trying to get all the facts so that something can be done to prevent a similar accident. True, responsibility will be placed--even to the extent of noting such things as unsafe behavior--but again, remember that supervisors are as much responsible for your unsafe behavior as you are.

We say: "If the student hasn't learned, the teacher hasn't taught," and that means we must improve our training methods to help you do things in a safe manner. In other words, don't keep any details from the investigator, or alter any information with an idea of shielding someone, because that someone could be the victim of a similar accident, especially if the proper corrective or preventive action isn't taken.

Report all personal injuries to your supervisor--even very minor cuts, scratches and bruises. This protects you in case complications arise. Be sure to get all breaks in the skin covered as soon as possible at least with a plastic bandage and have all cuts and punctures treated at the first aid dressing room or the hospital. Untreated minor wounds can develop infection and become serious through neglect.

Finally, please remember: If an accident occurs, tell about it as you saw it. If you see a dangerous or unsafe condition, correct it or report it. If you even suspect that an unsafe condition exists, report it so an investigation can be made. Then, if something is wrong, it can be corrected in time to prevent a possible accident or injury.

Check the Human Factor

If your company has dedicated itself to safe production by providing a safe working environment and by guarding all possible machinery, but your miners continue to have more than their share of accidents, check the human factor.

Accidents can be caused by unsafe surroundings and equipment; but more often, accidents are the result of unsafe acts by the workers.

So, begin by asking yourself serious questions about why your workers engage in unsafe practices.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Can A Safety Meeting Be Anti-Safety?

All supervisors, from managers, down to first-line supervisors, use safety meetings as a way to communicate safety information to other supervisors, and to hourly employees. Because accident prevention is a continuing management responsibility, safety meetings are generally scheduled at regular intervals--monthly, bi-weekly, or weekly.

One danger in any regularly scheduled activity is that it tends to become routine and develops into a set pattern--possibly even into a ritual. In religion, ritual may be uplifting; in a safety meeting, it's boring.

Here's one man's comment on ritualized safety meetings: "A safety meeting was scheduled every Tuesday at 9:30 a.m. Every week the supervisor would call the meeting to order with 'underwhelming enthusiasm,' conveying an obvious attitude that the meeting was a chore that he was required to do each week. So let's get it over with. In a dry, monotone voice, he would read from a paper--without once looking up to the people--the previous week's safety statistics. In the same manner, he would read a series of safety memos and bulletins and then end the meeting with a reminder to be sure you wear your hard hat, safety glasses, and safety shoes at all times when working.

"These safety meetings were laughed at. Those attending went knowing that the meeting would be a bore and the time spent in the meeting confirmed their anticipations. It is doubtful that anyone got the message that safety is important and it is possible that some of those forced to attend these weekly meetings may have built up some negative feelings about safety."

If your responsibility includes conducting safety meetings, review your safety meeting procedure to see if you can constructively improve your meetings to make them more effective for communicating accident prevention information. Here are some basic points to consider:

Make Safety Meetings Interesting--Safety doesn't need to be boring. Increase listeners' interest by varying the meeting format, and avoiding ritual. Repetition in safety meetings is useful to a degree, but presenting material in a new, refreshing, and stimulating way is always the challenge for the supervisor who wants to conduct an effective safety meeting. Use gimmicks sparingly. Gimmicks may create interest, but there's a danger of making the tail wag the dog. Too often, the interest and attention is centered on the gimmick and the safety message is overshadowed--even lost.

Don't Read From Written Material--There is a significant difference between spoken English, and written English. People generally find it difficult to follow and comprehend material intended for reading, such as this article, when it is read to them. Check this out for yourself the next time someone reads to you from an article, memo, or bulletin. It is almost always more effective and more interesting if the material is in the speaker's own words. Statistics should be used sparingly, unless the audience can see them.

Promote Group Discussion--This creates interest and dissipates boredom. Ask questions that cannot be answered simply by a "yes" or a "no." Get the group to think individually and collectively. Let them talk, but make sure you keep the discussion on the track.

Be Sincere--When you talk about safety, mean what you say. Above all, don't say what you don't mean. For example, it is not uncommon for a supervisor to say in a safety meeting that "safety comes first--ahead of meeting production schedules." Statements such as these, unless sincerely meant and then followed, should be left unsaid. When a supervisor's actions do not measure up to the statements that are made, the credibility of both the supervisor and the safety program suffer. Negative feelings about safety can be caused by supervisors who talk a lot about safety, but don't produce. So, watch what you say in safety meetings, and then live up to what you say.

August 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Supervisory Attitudes Toward Safety

A great deal of safety material developed for supervisors is aimed at improving employee attitudes, supervisory techniques, supervisory accident investigation, and other management aspects of a well organized safety program. Unfortunately, not enough attention is given to the attitudes of supervisors or even the competency of supervisors to motivate or train their workers in important elements of safety and occupational health.

In actual surveys of supervisors an overwhelming number indicate that "carelessness" is the chief cause of accidents, or they claim it is "disregard of safety rules" or "failure to wear safety equipment." However, the same supervisors, when pressed for better and more logical reasons, readily admit that many cases of so-called "carelessness" are really due to these factors:

*Employees are unaware that what they are doing is wrong.
*They misunderstand instructions.
*They consider the instructions unimportant.
*They are not given specific instructions.
*They find it difficult to follow instructions, or the instructions seemingly conflict with "let's rush out production."
*They deliberately disregard instructions by taking chances or "doing it their way."

While these are better reasons for unsafe acts, they point up supervisory deficiencies. Lack of training, poor training, poor communications, language barriers or a lack of communicating skills, and failure of supervisors to understand and cope with poor attitudes of employees are prominent when the facts are known.

Some supervisors recognize such deficiencies but are quick to blame top management. For example, they say that company policy requires them to relegate training and break-in duties to "experienced" employees. So even if the supervisor is competent to do the training, he or she is not doing it because of company procedure or policy. Also there is often no provision for training or even checking the training qualifications of the person who breaks in new employees.

Supervisors often complain that top management expects too much of them. They say that top management takes the "key person" idea too literally and makes the supervisor responsible for specific operations but does not give enough time to train employees or to enforce established rules. Some even claim that top management insists on production first and even condones violations of established safety rules to get out production.

In some instances, management has encouraged supervisors to take safety courses as the easy "solution" to meeting MSHA requirements. In such cases, management has the misconception that supervisory participation in a safety course will take them "off the hook." When management washes its hands of the safety program and even lags begind supervision in safety know-how, supervisors usually become frustrated when they try to get something done for safety.

What's the solution to such a dilemma? First, management must be made aware of supervision's problem. There's an old safety proverb which says, "If you're not part of the solution, you're probably part of the problem."

How do you make management aware of their problem? Communicate in terms they understand -- money! Accidents take money out of profits. Sometimes the hole is pretty big. Profit leaks of this nature can involve hundreds or even millions of dollars of product or services sold to make up for the loss. The safety professional has a major obligation to keep management informed of accident costs (not to hide them).

When management is behind the safety movement, you can begin to make plans. Without such support, planning is futile.

The safety professional must be a good communicator and must be able to monitor communications, both good and bad. The job of this professional is to identify poor communications on the part of supervisors and to help them overcome their deficiencies. Poor supervision leaves little chance for success of any safety program.

United States Department of Labor
MSHA
Mine Safety and Health Administration

HOLMES SAFETY ASSOCIATION

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September 1982

HOLMES SAFETY ASSOCIATION

MINERAL INDUSTRIES

SAFETY EFFICIENCY

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

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News United States Department of Labor

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MINE SAFETY AND HEALTH ADMINISTRATION

MSHA SEEKS COMMENT ON REVIEW OF UNDERGROUND COAL MINE SAFETY STANDARDS

The Department of Labor's Mine Safety and Health Administration (MSHA) is asking the mining community for written comments on the review and possible revision of safety standards applicable to underground coal mines.

In an advance notice of proposed rulemaking published in the Federal Register of July 9, 1982, MSHA announced that the agency is soliciting comments in three specific areas: roof support, blasting and explosives, and ventilation plan requirements and criteria. In addition, MSHA is seeking written comments relating to the applicability and effectiveness of any of the underground coal mine safety standards in Part 75 of Title 30, Code of Federal Regulations (CFR).

"Early public participation will assure the success of MSHA's review of the existing standards," said Ford B. Ford, assistant secretary of labor for mine safety and health. "Suggestions from the mining community will help MSHA to identify the standards that need to be revised and to establish priorities for possible regulatory action."

This review will enable MSHA to improve its existing safety standards to promote the health and safety of miners and further the goals of regulatory reform. The agency will use information gathered during this initial review process to evaluate the adequacy of existing standards, eliminate unnecessary reporting or recordkeeping requirements, minimize conflicting provisions, delete irrelevant standards, simplify and consolidate existing regulations, update standards to conform to the latest technological developments, and clarify and reorganize standards, where necessary.

MSHA urges the mining community and other interested persons to submit written comments on any of the underground coal mine safety standards, and particularly those pertaining to the approval of roof control plans and plans for ventilation systems and methane and dust control, as well as those pertaining to explosives and blasting standards, including the related requirements in 30 CFR Parts 15, 16 and 17.

Written comments should be submitted to the Mine Safety and Health Administration, Office of Standards, Regulations and Variances, 4015 Wilson Boulevard, Arlington, Va. 22203.

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WARNING **WARNING**

EXPLOSION

Explosions of gas and dust in coal mines have caused death and injury to miners and destruction of workings in all countries where coal is mined underground. In the United States the first reported explosion was in 1810; explosions have continued to the present. The danger to miners when an explosion occurs is not always measured by the violence created or by their nearness to the area through which flame and violence extend. As many, perhaps more miners have been killed by the blast and heat. Mine explosions often are caused by a combination of factors, including concentration of methane in air, formation of clouds of dust, and the presence of a flame or spark. These explosion factors have varied with changes in mining methods and practices over the years, but the basic causes have always been the same. Understanding of the causes and acceptance of ways to guard against explosions and their effects have been slow to spread from investigators to officials and then to bosses and miners. To a considerable extent there has been a belief that explosions were a mining risk that might be put off but could not be prevented. Such belief is based on the human failure to maintain and observe necessary precautions. These failures, caused by inertia to change, carelessness, or reliance on continuance of past explosion-free years, are being reduced in number and effect by education of miners and supervisors and acceptance of higher prevention standards.

The mine explosion is probably the most dreaded event in the coal industry. Each of us has spent many hours thinking about and discussing with others mine explosions, reasons why and how they occur, as well as the methods needed to eliminate them from the industry. We are not going to discuss methane-air ignitions; such information is readily available in many MSHA and Bureau of Mines circulars.

MINE EXPLOSION SEASON

However, do you know that it takes three ingredients to have a gas explosion--a volume of methane in the five to fifteen percent explosive range, oxygen, and an igniting agent? The maximum explosion requires a methane air mixture with nine to ten percent methane, two volumes of oxygen to burn one volume of methane, and a flame or spark with a temperature of more than 1,200^{O}F. Only small, insignificant amounts of methane (as little as 150 cubic feet) will initiate an explosion.

Nearly all gas explosions in recent years have occurred when methane accumulated at a working face or a number of working faces because of inadequate ventilation. The inadequate ventilation resulted from numerous reasons, accidental or intentional damaging of ventilation controls, nonuse of checks and line curtains, tying up of checks, and insufficient face ventilation. The investigation of most of the explosions in recent years showed clearly that although two, three, four, or five flame safety lamps were carried by section employees and officials or were on the section, methane accumulated and no one detected the methane. Thereafter, the accumulated methane was ignited by electrical face equipment.

Nearly every extensive explosion that occurred in a coal mine during the past 20 years occurred because of the aforementioned practices. Failure to detect the accumulated methane with flame safety lamps was the basic reason for Congress requiring that methane examinations be made with an approved device capable of detecting small percentages of mine gas. Investigators of nearly all these explosions were able to walk to the ignition, recreate the employee work patterns, and identify the piece of equipment that caused the arc or spark. We were generally able to learn how and why the methane accumulated, but we were never able to explain why neither the section officials nor the employees failed to detect the accumulated methane.

Although most coal mine explosions begin with the ignition of a methane-air mixture, extensive and all widespread explosions are propagated by coal dust. The size and violence of an explosion is determined by three things: first, the body of methane that is ignited; second, the method of ignition; and third, the amount of available fuel (coal dust) for propagation. A given quantity (volume) of methane when ignited will expand only several times its original volume; therefore, explosions of only methane are never extensive. A methane-air mixture, containing nine to ten percent of methane creates greater violence and force because of the ideal two volumes of oxygen to burn one volume of methane. The most violent explosions generally occur when the propagating agents, dust and/or methane, are ignited by blasting or something similar such as the wrecking of a moving haulage trip.

Some explosions move very rapidly and are considered fast-moving explosions; others move slowly and are called slow-moving explosions. A slow-moving explosion generally develops when the accumulated methane is near the lower or higher explosive range, five to six and twelve to fourteen percent, and when the igniting agent is near the 1,200 degree range rather than much higher.

When the ignition area is adjacent or close to open mine areas, the explosion forces expand, spread, and dissipate quickly, and generally, a slow-moving explosion develops. When the ignition occurs near the face of an entry in development work, the explosion takes a gun barrelling effect and accelerates rapidly. Personnel at the Bureau of Mines Research Center in Bruceton have been able to record explosion travel at almost unbelieveable speeds and developing pressures in excess of 300 pounds per square inch. Evidence in some mines following widespread explosions indicates that speed and pressure developed by the explosion greatly exceeded any explosion speed or pressure recorded at the experimental mine in Bruceton.

A widespread explosion must be propagated by coal dust, and the dust must be in suspension for propagation. Actually, the explosion moves by flame of one dust particle jumping to the next particle: therefore, the more dense the coal dust cloud, the greater the force and speed of the explosion wave. Occasionally, the moving explosion will do what we describe as sweeping. For some reason, a stretch of mine entry will be cleaned completely, the entry ribs will be eroded of all loose material, and the mine floor will be cleaned as if with compressed air. We have observed such areas extending from 10 to 200 feet in length.

In determing the direction the explosion has traveled, the experienced investigator checks for impinged dust and streamlining of dusts on posts, timber sets, offsets, and projections. Evidence of gas burning in return airways, crosscuts, and dead ends are often left for the investigator in the form of coking or roof, ribs and/or floor, soot streamers, and discoloring of the roof and ribs. The movement of debris, equipment, and supplies are generally not meaningful in determining direction of the explosion travel or points of origin.

While all of these items are important and information you should have to investigate an explosion, they are often minor items in determining where an explosion originated and the path of travel. The key evidence and the only completely reliable indicator of the origin of an explosion is the stoppings across the entries near an intersection. Such stoppings are necessary for ventilation, are installed in all mines, and show positively the direction of travel. If such stoppings are blown outby, the explosion forces were traveling from the entry faces. If the stoppings are blown towards the entry faces, the explosion forces were traveling towards the faces. These stoppings are the only positive evidence you can rely on regardless of other evidence or the number of explosions that might have occurred before you were able to investigate the disaster. Again, the key to the direction of explosion movement is the stoppings across the entries, not the stoppings in crosscuts between the entries.

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WARNING **WARNING**

EXPLOSION

We are rapidly approaching a particularly hazardous season of the year. Almost every major explosion that has occurred in a bituminous coal mine has been in the late fall, winter, or early spring months. No one seems to have clear-cut, logical answers on why coal mine explosions occur much more frequently during these particular months.

Of course, everyone who works in coal mines knows that we are now in the "drying out" season for our mines. In the spring and summer months, the outside air is about the same or of a higher temperature than that of our mine; therefore, the outside air during these months usually contains large amounts of moisture. As the warm air passes through the mine, it is cooled and loses moisture, which is deposited on the mine surfaces, and we have a situation commonly known as "sweating."

However, in the late fall, winter, and early spring seasons, cool air enters the mine and is warmed as it travels through the underground workings. The changing of the air from cold to warm causes it to "pick up" or gather moisture as it passes through the mine. The absorbing of the moisture by the warmed air as it travels through the mine causes the mine to "dry out."

Although we all agree that it is better to work in a dry area than a wet one, I think we also know that dry areas create greater explosion hazards than wet areas unless precautions are taken. Areas that are too wet to require rock-dusting during summer months often become bone dry during the winter months and require rock dusting. Often such rock dust had not been applied in the wet areas. Dust that was too wet to enter into an explosion during the summer season becomes bone dry, is easy to place in suspension and thus enters strongly into an explosion. Drying out of our mine surfaces during winter months, therefore, requires that we be very thorough in rock dusting all parts of the mine. Because of the drying out of a mine during the winter season, we know exactly why some explosions spread as rapidly and as far

MINE EXPLOSION SEASON

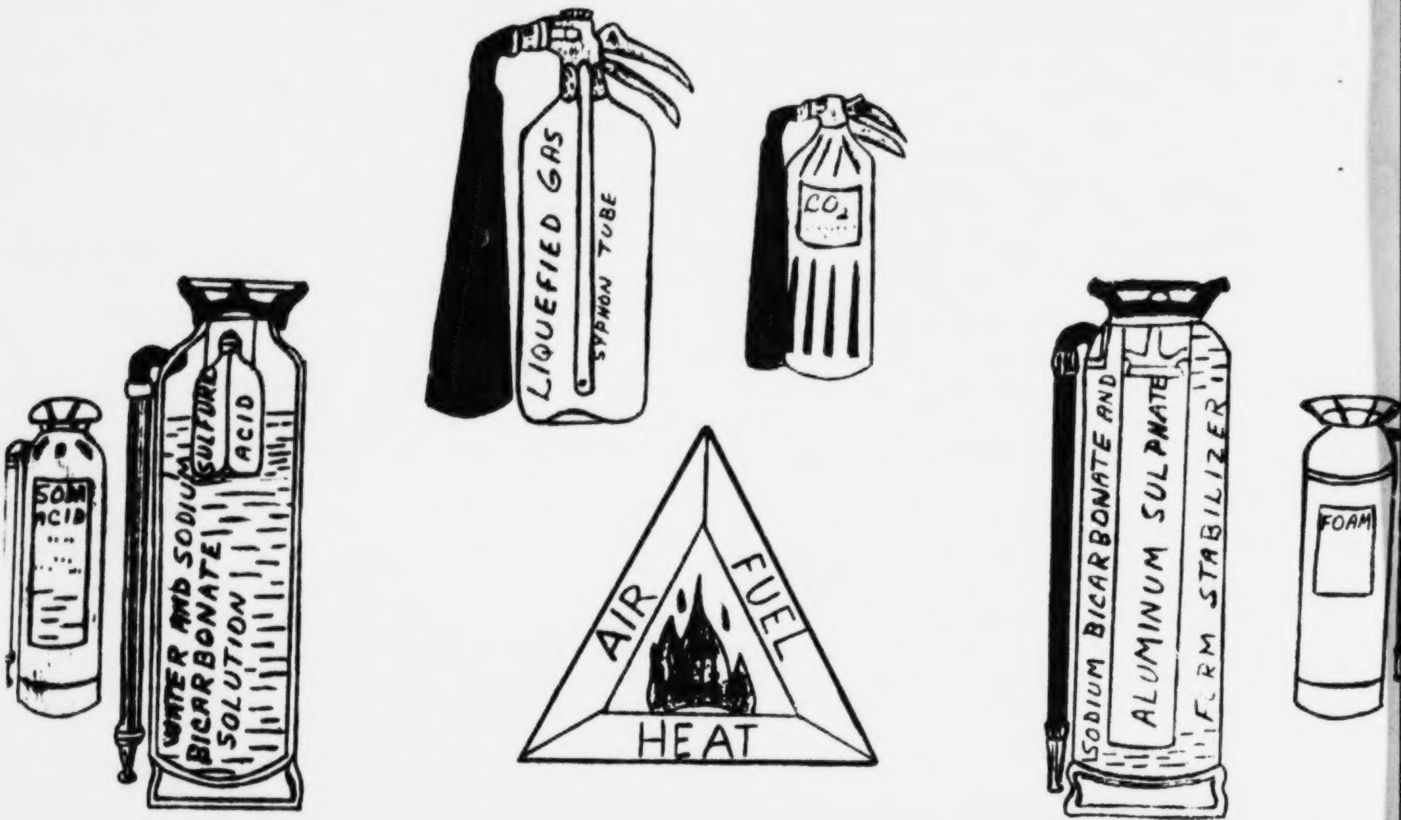
as they do. Dry dust enters into the explosion easier and permits it to spread more rapidly; however, no one has a good, logical reason for why methane appears to accumulate more easily and in greater quantities during the winter months than in the summer months. With or without logical reasons, methane does seem to be liberated more freely and accumulate in larger quantities more frequently during the winter months.

Investigators of the widespread explosions that have occurred in bituminous coal mines have found that the disasters resulted from the accumulation of large quantities of methane. They have found further that the gas was ignited by electrical equipment not maintained in permissible condition and that the explosion spread into other parts of the mine because coal dust entered into the explosion. Investigation of these explosions has shown further that the gas accumulated because of a ventilation interruption, and the gas was not detected even in the face areas. Now that we are in the mine-explosion season, it is absolutely necessary that we do all things that we know must be done to prevent such disasters. This means that we must at all times have adequate volumes of air at the working faces. Our gas testing must be thorough, complete, and regular. Areas that are difficult to keep reasonably free of coal dust and adequately rock dusted are the areas from the loading points to the working face, and these areas need special attention during the winter season.

Let's all resolve to make sure that we do not short circuit the air by hanging or typing up a check curtain or a line curtain. Let's keep our permanent stoppings up. Let's make all of our gas tests thoroughly and regularly. Let's keep our electrical face equipment in as good condition as possible, and let's try to eliminate dust accumulations and maintain our rock dusting to within reasonable distances of the faces. Let's not be responsible, even indirectly, for an injury, a death, or an explosion caused by a gas ignition.

HOLMES SAFETY ASSOCIATION

SAFETY TIPS


SODA ACID
WATER AND SODIUM BICARBONATE SOLUTION
SULFURIC ACID
LIQUEFIED GAS
SYPHON TUBE
CO_2
AIR
FUEL
HEAT
SODIUM BICARBONATE AND
ALUMINUM SULPHATE
FOAM STABILIZER
FOAM

KNOW

the Location of
Fire Extinguishers

It
Pays
Off

THE FOUR TYPES OF FIRES

A COMBUSTIBLE MATERIAL

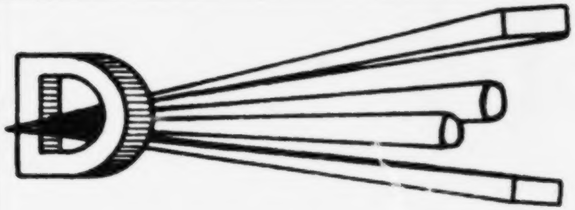
Timber
Smoldering Trash
Card Board Boxes
Wooden Pallets
Dry Rags
Tires

B FLAMMABLE LIQUID

Lubricating Oils
Greases
Fuel Oils
Gasoline

C ELECTRICAL

Electrical Motor
Battery Equipment
Battery Charging Station
Junction Box
Transformer
Circuit Breaker



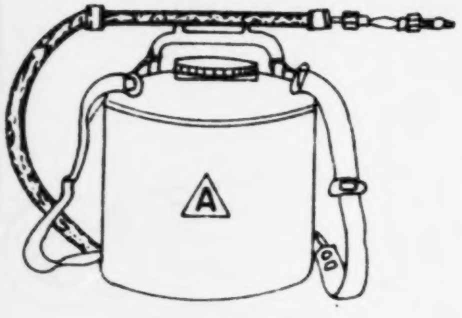
D COMBUSTIBLE METAL

Sodium
Titanium
Zirconium
Magnesium

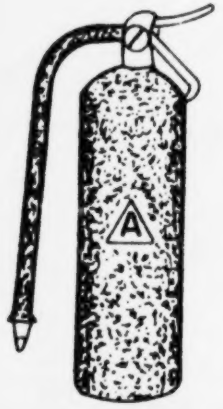
COMMON TYPES OF FIRE EXTINGUISHERS

WATER CARRIERS

For Class A Fires Only



PUMP TANK

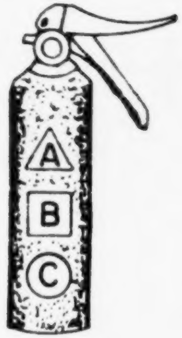


PRESSURIZED WATER

Do Not Use Water on Class B and C Fires

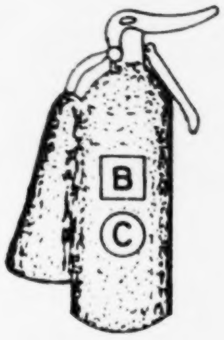
MULTI-PURPOSE

For All Types of Fires
EXCEPT Metal Fires



CARBON DIOXIDE

For Class B or
Class C Fires



Class	A	Ordinary Combustibles
Class	B	Grease and Other Flammable Liquids
Class	C	Electrical Fires

TIPS ON USE:

Stand close to the fire and aim at the base of the fire using a side-to-side sweeping motion to smother the fire. Stand by in case of reflash.

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Fire Prevention

Fire hazards are always present in mines even in wet mines; however, they are more pronounced during the Fall and Winter months when mines "dry out" due to surface climatic conditions. Now is the time to review work practices related to maintenance of electrical systems and electric equipment, proper blasting procedures, handling and use of lubricants, proper maintenance of frictional drives and other sources of ignition by friction. Removal of accumulations of loose coal, coal dust, discarded timbers and ties, and other combustible debris, and also ample applications of rock dust and good housekeeping practices will help materially toward preventing fires and will retard them if they occur. All supervisors and workers should determine the procedures they will follow in event a fire or explosion occurs, escape routes from their respective sections, and they should learn barricading procedures.

Practice What You Preach

Because some of you are supervisors in direct contact with your workers, this article is aimed at you. You have the responsibility to see that the working conditions are safe, and that your employees work safely.

Along with this you must do your work safely also, and by all means--set a good example. The fact that you are supervisors means that you are more capable and responsible at your jobs, therefore, your workers will always watch you and try to imitate your example--good or bad. This is especially true when you have a new person starting, or a person coming into your department from some other department. Talk to these people as they come into your department, and explain to them what is expected of them in respect to their work and safety procedures. Put them at ease, so that when they have questions or special problems they will come to you for the proper answer or method of doing their job.

Put a special emphasis on all phases of safety. Maybe the job doesn't seem like it is particularly hazardous, but as a rule there are more injuries occurring on jobs that seem harmless than on the hazardous-type jobs. For instance, the worker on the ground slips and falls more frequently than the one working on a narrow beam 20 stories up in the air. Because the job is less hazardous the employee is more careless.

Let's not have any of these "Do as I say, not as I do" routines. Do things in the proper manner only. Don't reach into machinery yourself when you wouldn't let your employees do this. The same goes for standing on the top step of a ladder which is too short for the job, or checking for a gas leak with a match, and the many other things you might be tempted to do.

Remember that your employees look to you as their guide. You have a great influence on their well-being. They will remember you mostly for your mistakes and shortcomings. Therefore, always set the very best example you can, and your workers will appreciate and respect you for it.

* * * * * * * * * * * * * * * *

Which of these are you?

Some Members keep their councils strong,
While others join and just belong;
Some dig right in, some serve with pride,
Some go along just for the ride.
Some volunteer to do their share,
While some lay back and just don't care;
On meeting nights some always show,
While there are those who never go.
Some always pay their dues ahead,
Some get behind for months, instead.
Some do their best, some build, some make,
Some never give, but always take.
Some drag, some pull, some don't, some do.
CONSIDER, WHICH OF THESE ARE YOU?

* *

Safety Endeavors

Education - Related to safe work procedures and practices.

Laws, Rules and Regulations - Promulgated by companies, insurance carriers, and State and Federal agencies which indicate safe operating patterns to follow.

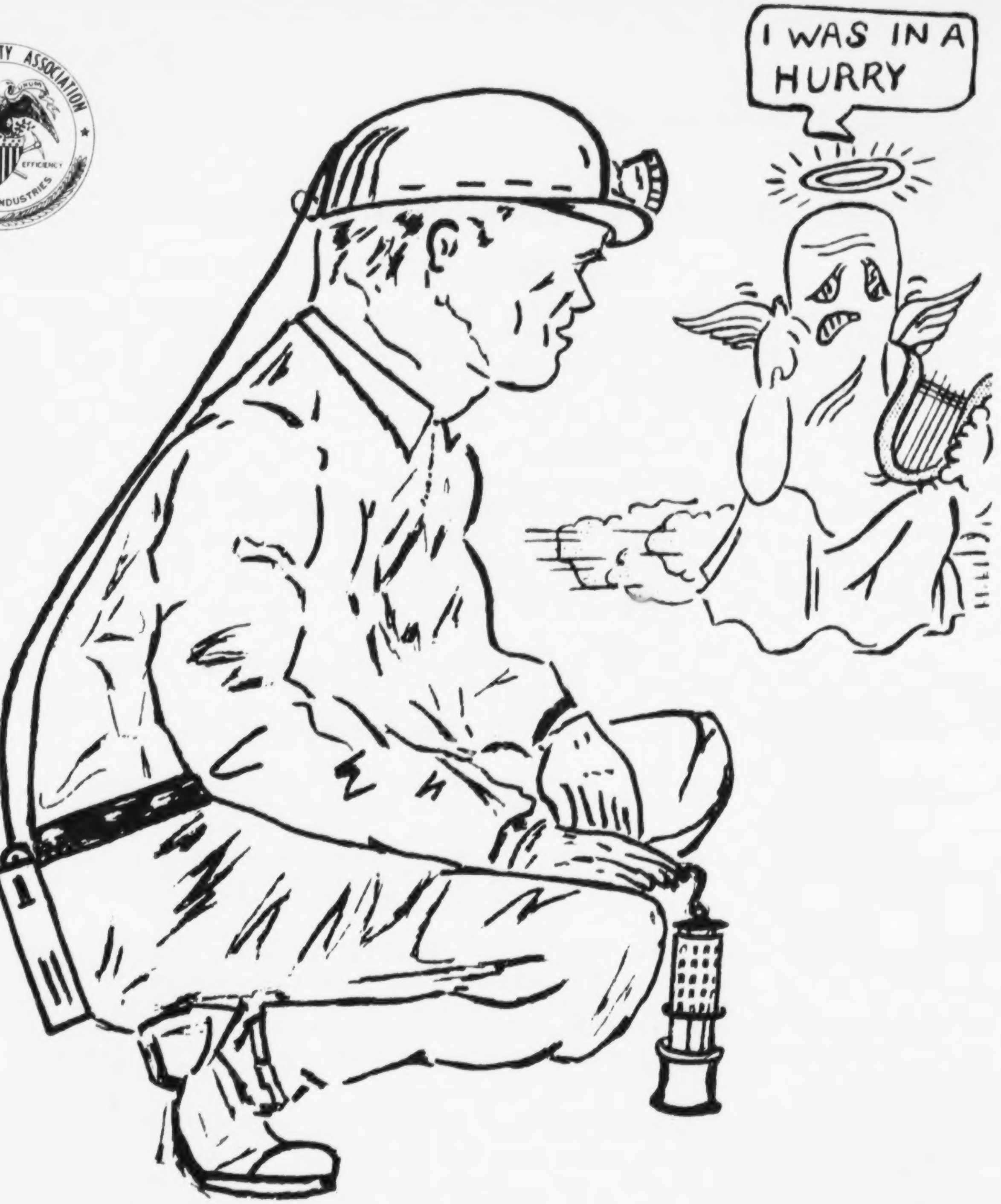
Supervision - Leadership in all phases of safety and its problems related to production.

Cooperation - This is sometimes referred to as discipline. In reality it takes the combined efforts of all persons, individually and collectively, to assure success in safety endeavors.

HOLMES SAFETY ASSOCIATION

SAFETY EFFICIENCY

MINERAL INDUSTRIES


I WAS IN A HURRY

SAFETY IS A MATTER OF

DECISION

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Choice is Yours

There's a TV commercial that's been run recently where an auto mechanic says, "It's up to you. You can pay me now - or you can pay me later." It's a simple truth that everyone should recognize. A couple of dollars now for a badly needed oil filter - or several hundred later for valves, rings, bearings, and labor.

Think about preventive medicine. In our lifetime, it has virtually wiped out tetanus, diptheria, smallpox - you name it. Now we guard against diseases that killed many of our ancestors like flies. For our health, we get shots when necessary and have regular medical checkups. If we choose not to do these things, we take the chance of catching a serious disease.

The same thing goes for SAFETY...with one big difference. It doesn't cost you a dime when you practice prevention. SAFETY pays you in preventing injury to yourself or your crew. Playing it safe pays in preventing lost time and lost income.

There's a catch in this Preventive Safety Procedure, however. It's true that it doesn't cost you a dime in money, but you still have to pay for it in terms of "Think." Think ahead; think how an accident can happen when you start into an unfamiliar area. Act only after you are alert to all the danger possibilities. And then act with caustion and lots of it.

As odd as it may seem, there's a parellel between modern safety practices and an ancient Chinese custom still observed in Formosa today. Some Chinese doctors are paid to prevent illness in their patients. Payday stops for the doctor when the patient gets sick ...and payment does not begin again until the sufferer feels normal.

Parellel? Your company has set up SAFE JOB PROCEDURES planned to avoid accidents while spelling out in detail the best way - the SAFEST way - to do the job. These procedures are your "preventive medicine" to keep you safe on the job and out of harm's way. The only difference is that, unlike the doctor, if you don't keep your safety awareness constantly active, you lose big. You lose time, you lose money, and maybe even your ability to earn a living.

Thought

All of us have two ends: an end to think with and an end to sit with. What we accomplish depends on which end we choose. Heads we win...Tails we lose.

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Know Your Mine

Do you think you know your own mine? Let's take a quick test on some of the safety features in your mine and your area to determine if you do know your mine as well as you should. If you answer all the questions correctly you know your way around. If not, find out the correct answers. Some day your life may depend on it.

- Where is the nearest first aid kit located? Is there a stretcher there also?
- Where is the nearest phone to connect you with the surface in case of emergency? Do you know who to call and what to say?
- Where is the nearest fire extinguisher located?
- In case of emergency evacuation what is the primary escape route?
- If the primary escape route is blocked what is the secondary escape route?
- Where are the emergency supplies located? Is the emergency water located in the same place?
- Is your self rescuer on your belt? If not, where is it located?
- Who is in charge in case of an emergency in your work place?
- How do you get in touch with that person?

To know your mine you should be able to answer all these questions. Can You?

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Care of Protective Equipment

In the past, much has been said about the availability and use of personal protective equipment, but little emphasis has been placed on the proper care of such equipment.

Consider two items that are basic protective equipment--safety glasses and hard hats. Safety-glass lenses are resistent to frontal impact and deserve particular care to prevent scratching, pitting, or etching. Lenses will occasionally get damaged even with the best of care, but many scratched and pitted lenses are due to improper personal care, such as placing them face down on the lenses, carrying them in a pocket along with other items, or dropping them on rough or hard surfaces. Marred lenses will reduce our ability to see, and scratches may weaken the lens.

Hard hats (safety caps) are designed and built according to U.S. Standards specifications and are able to withstand direct impact and protect the skull and neck bones from the force of an impact against the outer shell. The practice of cutting away parts of the hat or cap, of drilling holes through the shell for ventilation, or otherwise removing sections of the hat or cap tends to weaken the structure and thereby reduce its effectiveness. The suspension (head band) of a safety hat or cap is designed to keep the outer shell away from the head; consequently, it acts as a shock absorber between the outer shell and the head. The air space allows for cooling ventilation in hot weather. The suspension is adjustable and snug, yet comfortable fit should be maintained.

There may come a time when your welfare will depend on your protective equipment being in good condition - take care of it.

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Lucky You

Accidents never happen to you. They always happen to "someone else". We get reports of how these "other people" get hurt and think that it's too bad, but you don't have to worry because accidents don't happen to you.

Why is it that you aren't involved in accidents? Is it because you're a safe worker at all times or is it just luck? When was the last time you really stopped for a minute and thought about yourself and your safety behavior on the job? Think about these questions.

> Are you wearing your safety glasses and other protective equipment?
>
> Are you walking through areas that are littered with loose muck or dust?
>
> Are you operating a machine that doesn't have all the guards in place?
>
> Do you sit down with your back to moving machinery?
>
> Do you attempt to grease your equipment while it's operating?
>
> Do you work on electrical equipment that isn't properly grounded?
>
> Do you smoke in areas where no smoking signs are posted?
>
> Do you use the handrails when going up and down stairs and ladders?
>
> Have you had a close call or near miss lately?

If you answer yes to any of these questions I would say that you are lucky. "Other people" get hurt by not being aware of these hazards. Remember you can only be lucky for so long and then your luck runs out.

DON'T BE LUCKY, BE SAFE!

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

SLOGANS

It is a well-accepted fact that slogans and catch phrases make strong impressions on people and increase retention periods of the ideas presented. Here are a few good ones for your safety program:

1. **Control power to enjoy its benefits.**
2. **Check equipment - Check accidents.**
3. **Inspection + correction = protection.**
4. **It's not what you lift, but how you lift it that counts.**
5. **Your work injury can hurt your entire family!**
6. **You're not 'on the job' unless you work safely.**

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Code of Federal Regulations
Subchapter N--Metal and Nonmetallic Open-Pit Mines
Part 55.17--Illumination
Part 55.18--Safety Programs

At this time, we should discuss the illumination or lighting standards required by the Federal Government in all open pit metal and non-metal mines. The standard set forth in 55.17 "Illumination" is for the purpose of promoting health and safety, and the prevention of accidents. Since the standard is mandatory, any failure to comply will result in the operator being issued a citation in accordance with section 8 of the Act.

55.17 Illumination

55.17-1 Illumination sufficient to provide safe working conditions shall be provided in and on all surface structures, paths, walkways, stairways, switch panels, loading and dumping sites, and work areas.

Our discussion or topic for today, is "Safety Programs", Section 55.18, Federal Code of Regulations. The standards or regulations required in this part or section are mandatory in each metal and non-metal mine which is subject to the Act. As stated in the Purpose and Scope of this part 55, the standards were adopted to promote health and safety, and to prevent accidents in each mine. Should the operator fail to comply with any of these standards, that operator will be cited in accordance with section 8 of the Act.

55.18 Safety Programs

55.18-1 (reserved)

55.18-2 (a) A competent person designated by the operator shall examine each working place at least once each shift for conditions which many adversely affect safety or health. The operator shall promptly initiate appropriate action to correct such conditions.

(b) A record that such examinations were conducted shall be kept by the operator for a period of one (1) year, and shall be made available for review by the Secretary or his authorized representative.

(c) In addition, conditions that may present an imminent danger which are noted by the person conducting the examination shall be brought to the immediate attention of the operator who shall withdraw all person from the area affected (except persons referred to in section 104(c) of the Federal Mine Safety and Health Act of 1977) until the danger is abated.

55.18-3 through 55.18-5 (reserved)

55.18-6 New employees shall be indoctrinated in safety rules and safe work procedures.

55.18-7 through 55.18-8 (reserved)

55.18-9 When persons are working at the mine, a competent person designated by the mine operator shall be in attendance to take charge in case of an emergency.

55.18-10 Selected supervisors shall be trained in first aid. First aid training shall be made available to all interested employees.

55.18-11 (reserved)

55.18-12 Emergency telephone numbers shall be posted at appropriate telephones.

55.18-13 A suitable communication system shall be provided at the mine to obtain assistance in the event of an emergency.

55.18-14 Arrangements shall be made in advance for obtaining emergency medical assistance and transportation for injured persons.

55.18-15 through 55.18-19 (reserved)

55.18-20 No employee shall be assigned, or allowed, or be required to perform work alone in any area where hazardous conditions exist that would endanger him or her safety unless the person can communicate with others, can be heard, or can be seen.

September 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

IN A DAY'S TIME!

A LOT OF THINGS HAPPEN DURING A GIVEN PERIOD OF TIME IN THE BODY OF AN ADULT OF AVERAGE SIZE. HERE IS WHAT YOU ACCOMPLISH IN JUST 24 HOURS:

Your HEART beats 103,689 times.

You BREATHE 23,040 times.

You INHALE 438 cubic feet of air.

You EAT 3.25 pounds of food.

You DRINK 2.9 quarts of liquids.

You LOSE .87 pounds of waste.

You SPEAK 4,800 words.

You MOVE 750 muscles.

Your HAIR GROWS .01714 inch.

Your NAILS GROW .00046 inch.

You EXERCISE 7,000,000 brain cells, more or less.

THINK ABOUT IT--ALL THIS ACTIVITY--AND YOU DO IT AS EASILY AS FALLING OFF A LOG. BUT DON'T. ALL THIS ACTIVITY CAN BE STOPPED PERMANENTLY BY AN ACCIDENT THAT CAN HAPPEN IN A SPLIT SECOND.

ACCIDENTS ARE CAUSED BY PEOPLE. PEOPLE CAN AND MUST PREVENT THEM!

THE HOLMES SAFETY ASSOCIATION CREED

Our work	SAFETY EDUCATION - Goes on,
Our purpose	ACCIDENT PREVENTION - Endures,
Our hope	TOTAL SAFETY AWARENESS - Still lives, and
Our dream	AN ACCIDENT FREE ENVIRONMENT - Will never die,
SAFETY	Is and Always will be OUR FIRST CONSIDERATION!

ABSTRACT FROM FATAL ACCIDENT

September 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Roof Fall Accident

General Information: A fatal roof fall accident occurred while bolting a cut in the pillar split. The victim received a fatal injury when a portion of the roof fell crushing him against the mine floor and roof bolting machine.

Description of Accident: The continuous-miner operator explained that when he arrived at the No. 3 pillar split, the victim had already moved the roof-bolting machine into position for installing the first roof bolt. Therefore, the continuous-miner stated that he installed one metal jack and the victim began drilling and installing the first roof bolt while he got the second jack from the roof-bolting machine. He installed the second jack while the victim continued bolting. According to the continuous-miner operator, while he was turned toward the rear of the bolting machine getting a roof bolt for the victim, the roof fall occurred.

After realizing that the victim had been caught by the fall, he tried to manually lift the rock but was unable to do so. He summoned help and the victim was freed but had sustained fatal injuries.

Discussion: The face of the pillar split was not supported as required by the approved roof-control plan. However, temporary roof support (posts) were available.

The approved roof-control plan was not being complied with, in that the controls of the continuous miner had been advanced inby permanent roof support by approximately seven feet in the pillar split and roof bolts were being installed in the same split without adequate temporary roof supports, a violation of Section 75.200.

ABSTRACT
FROM
FATAL ACCIDENT

September 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Drowning Accident

General Information: Two laborers drowned when the boat on which they were passengers swamped forcing them into the dredge pond.

The open-pit sand and gravel operation was mined by a diesel driven eight-inch dredge pump. Material was pumped to shore where it was screened, dryed, and stockpiled.

The work boat involved in the accident was aluminum with foam flotation material contained in the three seats. The manufacturer's listed maximum load capacity was 510 pounds. The company had covered the floor of the boat with one inch boards to protect it when tools and equipment were transported. This effectively reduced the load capacity an undeterminable amount. The boat was powered by a four-horsepower outboard motor which would weigh from 40 to 80 pounds depending on the amount of gasoline carried. Four people, whose total weight was estimated at 630 pounds were in the boat at the time of the accident.

The weather was cold, 45 degrees F., rainy, and a wind of approximately 20 mph was blowing. Witnesses stated that the water on the pond was "choppy." The pond was estimated to be about four acres in size. The men were provided with "Sterns," zip-on, vest-type life preservers. Additional clothing worn by the men because of the weather added an undetermined amount of weight to the overall weight in the boat.

Description of Accident: The victims had been working without incident. Later in the afternoon, a group of seven men helped to float the dredge to its work area at the far side of the dredge pond. After it had been secured, the plant foreman assigned one worker to operate the boat and take three of the employees from the dredge to the shore, then return and pick up the remaining three. The two victims had their life vests on but not secured. Approximately 75 yards from the dredge, witnesses stated that the boat began taking water over the bow and quickly swamped. The bow was submerged and the stern was partially out of the water. As the bow started into the water, the two victims jumped from the boat, feet first. As they entered the water, their life vests came off and neither man surfaced.

Cause of Accident: The accident was caused by loading the boat beyond its capacity. A contributing factor was the rough water of the pond. Failure on the part of the victims to securely fasten their life vests contributed to the severity of the accident.

THE LAST WORD

SEPTEMBER

LABOR DAY

In honor of the wage earners of the Nation, the United States and Canada have set aside the first Monday in September as Labor Day, a legal holiday. The observance of this day grew out of an annual parade in New York City by the Knights of Labor on September 5 in the 1880's. Oregon, in 1887, was the first state to recognize Labor Day as a legal holiday, and other states quickly followed. On June 28, 1894, Congress passed a bill making the day a National holiday. All states in the Union now observe the holiday.

Organized labor has helped to bring about many humanitarian reforms. Laws have been passed regulating the conditions of employment of children, establishing maximum hours and minimum wages for men and women, requiring protection against industrial accidents and providing compensation for unemployment.

Protection against industrial accidents cannot be controlled by laws alone. A sincere desire of the worker is needed in accepting the rules of safety and to become educated in safety before accidents can be substantially reduced.

"HARVEST"

September preeminently is the month of "Harvest." During this season, people have celebrated harvest festivals. Pagan people celebrated through religious ceremonies in times of peril and disaster, and also to give thanks for Nature's annual bounty which was gathered and stored for use during the long winter months ahead.

Our nationwide accident record for 1982 has not been good and much improvement is desired. During this harvest season, all of our know-how should be gathered along with added desire in improving our record to reduce accidents. Special attention should be given now to improve dust control and to re-rock dust areas which were seasonally wet during the summer months.

FOLLOW SAFETY THRU in -82-

MSHA

Here's a Recipe For A Terrible Day

Take a pint of ill humor - - -
Add one or more unfortunate incidents - - -
Set over a good fire - - -
When at boiling point, add a teaspoon of temper.
Baste from time to time with sarcasm - - -
Cook until the edges curl - - -
Add a handful of haughty words - - -
As the mixture curdles, stir furiously and then
Serve while sizzling!
Isn't THAT a great recipe for a terrible day ???

☆U.S. Government Printing Office: 1982—576-091/11

MSHA, Holmes Safety Association
P.O. Box 25367
Denver, Colorado 80225

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OCTOBER 1982

HOLMES SAFETY ASSOCIATION

BULLETIN

"SAFETY"
It's Up to You,
In '82

L 38.12:

HOLMES SAFETY ASSOCIATION

in this issue....

October 1982

1. Safety Topics, "Welcome New Members"
   "Look Sharp--Be Safe"
2. Safety Topics, "Drilling"
   "Pay Check Versus Compensation Check"
3. Abstract, "Drilling Accident"
4. Poster, "Collaring in a Bootleg Drillhole"
5. Safety Topics, "The Jackleg-Drill Operator"
   "Safety is Common Sense"
6. Safety Topic, "How to Get Along With People"
7. Safety Topic, "Think Right Toward People"
8. Safety Topic, "Seven Ways to Take a Load Off Your Back"
9. The Last Word
10. Meeting Report Form (chapters only)

October 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WELCOME NEW MEMBERS

Manville Products Corporation
Lompoc Pit and Mill-Celite
Lompoc, California

Penn Allegheny Coal
Allegheny No. 3
Tarentum, Pennsylvania

Swistock Associates Coal Corp.
Swistock
Houtzdale, Pennsylvania

Sky Haven Coal Incorporated
Sky Haven
Penfield, Pennsylvania

Freeman United Coal Mining Co.
Industry Mine
Industry, Illinois

Nassau Coal Corporation
Nassau
Clearfield, Pennsylvania

Buckhannon Foreign Sales Inc.
Buckhannon Foreign Sales
Buckhannon, West Virginia

Cowin and Company Inc.
Harris Mine Twilight Shaft
Birmingham, Alabama

Cowin and Company Inc
Sewell 1-A Shaft
Birmingham, Alabama

Cowin and Company Inc.
Sewell 1-A
Birmingham, Alabama

Double B Mining Incorporated
Double B Mine
Harman, Virginia

Stear Mining Company
Black Hawk-Gold and Silver
Truth or Consequences, New Mexico

Amax Phosphate Incorporated
Big Four-Phosphate Rock
Bradley, Florida

Continental Enterprises
Continental Enterprises
Stacy, Virginia

H.W.C. Coal Company Inc.
No. 1 Mine
Fairmont, West Virginia

Lackey Coals Incorporated
30-B Mine
Summersville, West Virginia

Kitt Energy Corporation
Kitt Energy
Philippi, West Virginia

Columbus Mining and Construction
Columbus Mining
Buckhannon, West Virginia

Fairfax Trucking Company
Fairfax Trucking
Elkins, West Virginia

Lexie Coal Corporation
Lexie Coal
Summersville, West Virginia

WELCOME
NEW MEMBERS

T and R Coal Company
T and R Coal
Summersville, West Virginia

Safety Specialist Company
Safety Specialist-Training
Summersville, West Virginia

Empire Coal Company
Empire Coal
Richwood, West Virginia

Badger Coal Company
Tygart Valley
Philippi, West Virginia

Perry Coal Company
Perry Coal
Interprise, West Virginia

Glory Coal Company
Flag Run
Sardis, West Virginia

Glory Coal Company
Dola
Lumberport, West Virginia

Bull Run Mining Company
Meredith
Valley Point, West Virginia

Cama Coals Rockbull Division
Rockbull No. 1
Valley Point, West Virginia

Lobo Coal Company
Lobo
Kingwood, West Virginia

Preston County Coal and Coke
Corporation/Preston County
Morgantown, West Virginia

* * *

Look Sharp--Be Safe

Basically there are seven "garment safety sins" to avoid. Knowing what they are and correcting the situation as needed will prevent work clothing from becoming a shroud.

The Sins

1. Wearing dirty work clothing.
2. Ignoring missing buttons.
3. Neglecting tears or rips.
4. Wearing pants with too deep a cuff.
5. Wearing oil or chemical-soaked clothing (or clothing soaked with any flammable material).
6. Having floppy pockets, a dangling tie, or loose apron strings.
7. Wearing poorly-designed, ill-fitting clothing at work.

Proper work clothes will not only make the employees look sharp, but combined with other accident prevention practices, they will keep them safe.

October 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Drilling

Many accidents that occur during drilling operations are attributed statistically to a variety of hazards. During drilling operations, a high concentration of workers are exposed for extended periods in close working quarters to dangers of falls of ground, moving machinery, high pressure hoses, explosives, and gas or water outbursts. Noise and vibration restrict person-to-person communication and frequently fog, water, and an oil-laden atmosphere limit visibility, thereby increasing the hazards of falling and tripping. The overall hazardous exposure during the drilling cycles frequently does not receive the close appraisal it deserves.

The following suggestions are things to think about with regard to safe drilling operations.

1. Equipment must be inspected each shift and defects corrected before the equipment is used.

2. Miners operating or working near drilling machines must position themselves so that they will not be struck or lose their balance if the drill steel breaks or sticks.

3. Drilling should not be attempted from positions that hinder their access to the control level.

4. Drilling must not be attempted from insecure footing or staging or from atop equipment not designed for this purpose.

5. Bit wrenches or bit knockers must be used to remove detachable bits from drill steel.

6. Short starter steel not over 3 feet long should be used when collaring holes with hand-held feed-leg drills.

7. Miners must not hold the drill steel while collaring holes or rest their hands on the chuck or centralizer while drilling.

8. Air must be turned off and bled from the hose before moving portable drills from one face to another. A safety shutoff valve that automatically shuts off the airflow if the hose is cut or uncoupled before the air is shut off is available.

9. Suitable receptacles or racks must be provided for drill steel stored on jumbos.

10. Miners working below jumbo decks should be warned before drilling begins.

11. Drills must be firmly anchored before drilling is started and should be retightened frequently thereafter.

12. Safe means of access must be provided to jumbo platforms and jumbos must be blocked to prevent accidental movement.

13. Jumbo platforms more than 4 feet high must be equipped with handrails and toeboards. Chains or demountable rails should be used where fixed handrails interfere with drilling operations.

Think about your operation in drilling. How many items could you add to the list to insure safe drilling operations?

Pay Check Versus Compensation Check

There can be safety programs for years. The plant can be covered with safety posters. Machinery can be safely guarded. We can all be shown the safe way to do our jobs. But none of these things will make us accident free if we don't want to be. It is up to us. We must accept responsibility for our own safety and not depend too much on machine guards and our fellow workers.

Nearly everything we possess is some way connected with our ability to earn a living. The plant safety program helps us to keep on guard so we can protect that ability. By working safely we give ourselves security.

Accidents cost our company money. They cost the workers money also. No compensation check is as big as a pay check. Just imagine how tough, how impossible it would be to pay bills, to educate children, to buy a home with nothing to rely on but compensation checks.

Accidents cause inefficiency also. You cannot have a smooth operating plant when accidents keep interrupting the flow of work, taking skilled and well-trained people off the job.

The safety program helps us all stay on the job. And that means more production and more job security.

ABSTRACT FROM FATAL ACCIDENT

October 1982

HOLMES SAFETY ASSOCIATION
MONTHLY SAFETY TOPIC

Drilling Accident

General Information: A development driller learner was in the process of placing alignment poles in previously drilled holes at the working face when the left boom of a two-boom jumbo drill swung freely striking the victim in the upper right shoulder and head. A fitting on the hydraulic line which controlled the horizontal movement of the boom had been leaking which allowed the boom to swing when the hydraulic stabilizer jacks were lowered.

Access to the underground mine, a lead, zinc and copper operation, was through two circular 12½ foot diameter concrete-lined shafts. A room and pillar mining method was used. Ore was drilled with mobile rubber-tired, double-boom jumbo drills, loaded with a combination of AN-FO and dynamite, then detonated. Blasted material was loaded onto haultrucks and transported to the ore-storage pockets. The material was crushed and hoisted to the surface mill storage bin.

The drill involved in the accident was a rubber-tired drillmobile equipped with two 15-foot booms which had a high-frequency rotary percussion drill mounted on each boom. The booms were capable of a 50-degree swing left or right. The swing motion, like all drill functions, was hydraulically powered and controlled by hand valves located at the operator's console. The hydraulic cylinder which controlled the horizontal swing of the drill boom was 5 feet long with a diameter of approximately 4 inches.

Previously, the original left swing-cylinder hydraulic-line connector had been broken and the cylinder had been taped and a 90 degree, ¼ inch street ell-pipe fitting had been installed. It was relatively easy for the drill operator to accidentally break or crack this hydraulic cylinder fitting while positioning the drill slide. This had happened on the morning of the day of the accident.

It was usually left up to the discretion of the drill operator, depending on the extent of the damage done to the fitting, and extent of hydraulic leak, to decide whether or not to use the drill boom. It was also common practice to drill with one boom if the other was not functioning. At the time of the accident, the drill operator did not realize the hydraulic pressure had bled off.

Description of Accident: The drill operator was using the right drill to drill burn holes. The victim was operating the left drill and while doing so damaged (cracked) the street ell-type fitting with the drill support slide which controlled the swing motion of the boom. The drill operator instructed the victim to go to the shop area and inform maintenance that repair was needed on the street ell-type fitting since hydraulic fluid was leaking from the fitting. Even though it was leaking, the drill operator continued to use the drill without any problem while the trainee was gone.

When he returned and the drill rig was in position to complete the round, the victim informed the drill operator that he would insert charging poles in drilled holes for alignment purposes. Although the drill operator instructed the victim to go get the powder ready for charging the victim insisted on inserting the charging poles in drilled holes stating that they had plenty of time before getting the powder.

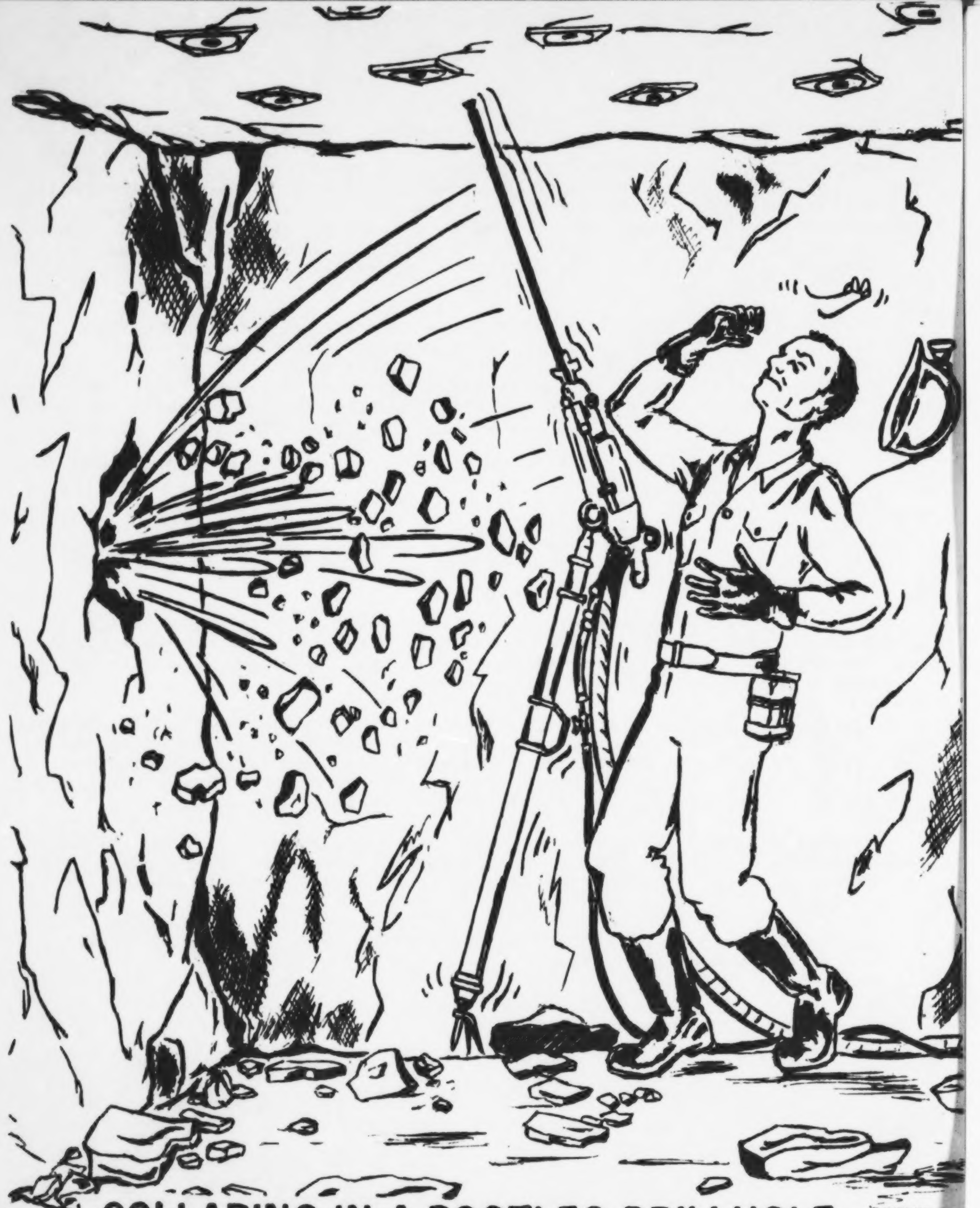
At this time, unknown to either man, the cracked fitting had allowed hydraulic fluid to leak from the left swing hydraulic cylinder relieving the pressure which controls the swing motion of the left boom. The left drill was about 2 feet off the floor of the drift at this time. The victim left the control console on the drill rig and started to the face of the drift while the drill operator proceeded to set the hydraulic stabilizer jacks on the drill rig.

He set the two rear hydraulic stabilizer jacks first, then the left front hydraulic stabilizer jack was set. While doing this, he noticed the left boom starting to swing to the left. He warned the victim who turned around just as the boom hit him.

Cause of Accident: The direct cause of the accident was the bleeding off of hydraulic pressure from the cracked street ell-type fitting on the hydraulic cylinder which controlled the horizontal (swing) motion on the left boom. A contributing factor was the drill boom was not blocked against motion until the damaged fitting could be repaired.

Recommendations: Whenever hydraulic leaks occur which are significant enough to affect the control of movement of any piece of equipment, the affected equipment should be removed from service and blocked against motion.

A shield should be fabricated to protect the swing cylinder hydraulic connector from being damaged.



COLLARING IN A BOOTLEG DRILLHOLE

October 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Jackleg-Drill Operator

Part I

An important function performed in underground metal and nonmetal mines is that of the jackleg-drill operator. The job is not new, but when compared to other job classifications, it has its problems, some more pronounced than others.

Each year, there are serious lost-time drilling injuries reported in metal, nonmetal, and stone underground mines.

Discussion with Jackleg-Drill Operators

Discussions were held with groups of miners on procedures followed in jackleg drilling and hazards associated with operating jackleg drills. The groups consisted of two or more jackleg drill operators at three mines in three geologically and geographically different locations in the United States. Experience of the miners ranged from one with less than 1 year of operating experience to miners with approximately 30 years experience operating jackleg drills. Following is a summary of concepts discussed by the miners during these talks.

Most miners collar holes with the length of steel used to complete the hole. For Example, where the final depth of hole is 6 feet, they use 6-foot steel to collar the hole. Six feet was the usual depth of hole.

For collaring holes, contract miners working in hard rock generally steady the steel with their left hand while operating machine controls with their right hand. Other mines, where helpers are used on jackleg drills, have the helper steady the steel until it is collared. Some miners, working in softer ground, are able to collar holes while standing behind the drill with no support given directly to the steel. Where ground is not too hard, it was suggested that a pick be used to make notches in the face. The notches assist an inexperienced jackleg driller in collaring holes. A "trick of the trade" that sets a professional miner apart from a novice is the ability to get the correct angle on the leg and drill combined with the correct leg pressure. Where the angle and leg pressure are nearly optimum, the drill works for the miner without the need for useless energy expenditure on the miner's part. The drill is most efficient under those conditions and essentially works alone.

Some miners put a foot on the stinger to steady the drill while drilling downholes. All miners are warned against using a foot to steady the steel on downholes. A real hazard would exist of getting the steel through the foot.

When changing to a longer steel, one approach was to put the longer steel in the machine and then maneuver the steel into the hole, using leg pressure. A second approach was to put the longer steel into the hole and then manuever the machine into the steel. Those using the second approach believed that maneuvering steel and machine was excessive and unnecessary work. However, those who moved steel and machine at the same time believed their procedure gave them more control over the machine.

Miners were unanimous in stating that, where steel breaks while drilling, the operator should turn loose of the machine. Such a procedure requires that the drill operator not maintain a "white-knuckle" grip on the machine. If the operator does hold onto the machine after the steel breaks, the sudden machine movement gives no opportunity to turn off the air to the machine or leg, and the miner will be pulled forward. The forward pull may impale the miner on the broken steel in the hole, or the miner will at least be slammed into the face. Some miners with many years of experience on the same machines said that they could guide the drill down, after the steel broke, if the leg pressure was low enough. This procedure could not be recommended to anyone else.

When steel is stuck in the face, some miners attempt to pull it with air-leg pressure, pushing against the face area. Such attempts are often futile, and the procedure is not considered safe by many miners. Where stuck steel is blasted out, some means should be provided to insure that miners on the following shift are aware that steel is in the muck pile, so they do not injure themselves while loading out the muck. The miners on the following shift need a warning of the hazard, and some standard procedure should be available for such warning.

Part II

We will continue the discussion and see if all of us can better understand the problems.

Proper Alignment of holes

New miners often use tamping sticks or other means to line up holes while learning to drill a round, but with experience, an operator can visually line up the round. Good blasting results depend on location of the back of the hole. In V-cuts, a tamping stick may be used to determine the location of the back of the hole, but with experience even this procedure is not necessary. However, in foggy conditions, it may be necessary for any operator to use some means to mark holes for alignment.

Machines furnished by some companies are not standard regarding make and model. Controls are different and the sound of operation of different drills is different. Some controls have a twist handle similar to a motorcycle handle for controlling air to the drill. Other machines have valve handles that move up and down. Many miners believe it is desirable to have the same make and model of jackleg drills. Since all machines run differently and have different operating sounds, where different machines are used it is difficult to know when a machine is bogging down with the possibility of creating a safety hazard or, at least, not working as efficiently as it should.

Noise standards require the use of ear protection in lieu of sound muffling apparatus. Miners talked with believed adequate technology is not available to quiet noise associated with jackleg drilling. Present mufflers in use cause icing and efficiency is decreased to a very low point. Even with a muffler installed on a machine, the sound of steel rattling in the hole and pounding of the bit is probably harmful to unprotected hearing. Many experienced miners prefer to use some means of ear protection. Mine operators often provide a wide selection of ear protective devices.

Part III

Proper Training for Apprentice Miners Necessary

Some mines have an apprentice training system. Trainees are sent to different locations in the mine to learn jackleg drilling and other work performed by underground miners. Some contract miners believe that this system is not equitable where they are concerned. For example, they must give the trainee a percentage of their contract pay, and training the new operator slows down their contract operation. They believe, in effect, that as contract miners, they are paying the company to provide training to new employees hired by the company. It would seem more equitable to them if the company would pay an additional sum to them for providing training. Other mines provide training classes in drilling and other work. Most workers, however, have learned their skills through observing experienced miners, and through actual operation of equipment.

One miner believed that text books of general scope should be available to miners. The books should provide basic information on a miner's skills and functions. Much of the material would have to be designed for individual locations. Information on reading ground is something that is more art than science and can be learned only from experience at particular locations. Some professional miners believe that their wide scope of skills are not properly recognized outside the mining community.

Most experienced miners believe the jackleg drill is a well-designed tool for the work it is required to do. However, it was suggested that leg design be changed so that the leg housing would push against the ground instead of the small stinger. Where the housing was against the ground, the leg would push the the drill up from the housing. The present housing is against the drill and the leg pushes down. With the relatively larger housing on the muck, it would not sink in and get stuck as the present leg sometimes does.

Maintenance on jackleg drills was considered generally good. The only problems cited were those where drills were not adequately repaired because (apparently) drill repairers were not told what repair was needed. A tag system could correct that problem. Also, control valves were sometimes put on in reverse. When that occurred, a machine would lower when the lever was pushed in the direction that should extend it.

If a jackleg is defective, miners will try to get it lubricated by filling the machine or the hose or both with oil, so that the machine can be worked for the balance of the shift. A spare machine is brought into use depending on the amount of time left on the shift and on how bad the machine is operating. In raise mining where much travel time is involved in getting another jackleg, almost an entire shift can be spent in carrying a defective machine down the raise and bringing a spare machine back to the working place.

Where a machine is defective, the shift boss is told what is wrong with it. Since the shift boss has many duties to perform, and since unforeseen and serious problems may occur on the shift, if the boss has several jackleg drills defective on one shift, it may be difficult to follow up on defective drills to insure that necessary work is performed. A tag used to describe defects would perhaps be a more efficient means to use. The tag could have a list of most common drill ailments. An operator could check off the problems that were experienced, and the drill repairman could initial that necessary work had been done. The shift boss would no longer have to remember problems afflicting several drills, and would not have to accompany drills to the repair shop and report problems on each drill to a mechanic. The mechanic, in turn, would not have to remember defects in drills brought in by different supervisors on different shifts. When machines are repaired, they should be tried at the shop to insure that they are working properly. Mechanics should keep in mind that air in the shop is higher pressure than air available in working places.

Part III-A

This is our final discussion on the hazards associated with and the health and safety precautions needed while working and running jackleg-drills.

Rock Drills be Muffled

MSHA noise standards have been interpreted as requiring that all hand-held pneumatic rock drills be muffled, and where required, that ear protection continue to be used, to prevent exposure in excess of that specified in the standard. Although some miners have complained that muffled drills cause icing and drill inefficiency, a properly designed muffler will not significantly affect efficiency or cause icing that cannot be prevented. In cases where mufflers have been applied and miners have become accustomed to their use, acceptance is generally good. In fact miners prefer muffled drills when they are properly designed, because of the better visibility and cleaner atmosphere associated with their use.

Many of the machine accidents can be traced to poor visibility caused by dense fog. Foggy conditions should be eliminated as much as possible by installing water traps in the air line, proper adjustment of the machine oiler and keeping the steel and water needle free of obstruction. A properly designed muffler will eliminate most of the fog caused by oil and water in the air line. Where freezing is a problem, water traps or an air drying system may be necessary. Under extreme freezing conditions, an antifreeze system such as tanner gas or notox may be installed in the air line.

Mufflers are capable of reducing noise levels below 115dBA, and this will protect persons who come into the vicinity of such drills for short periods without hearing protection. The combination of a properly designed muffler and well fitted hearing protectors will reduce the noise level reaching the drillers ear to below 90dBA, and should enable the miner to drill for the entire 8-hour shift without adverse or irreversible hearing damage.

Hazards mentioned with regard to running jackleg drills included the following:

1. An operator should never stand in front of an operating drill to clean up or for any other reason.

2. Operators should not wear knit gloves that can be caught in the chuck. If an operators' hand is caught, the hand and arm will be wrapped around the chuck before the operator has time to turn off the drill. For the same reason, many miners do not steady the steel with a gloved hand because any jagged edges of drill steel could catch the glove and twist the hand around the steel. Also, for a similar reason, rings should not be worn, nor ragged clothing that can be caught by moving parts of the drill.

3. Miners must be alert to the possibility that drill steel can break. They must also stay in the clear of the suddenly extended leg when a steel breaks and the drill falls. Especially in ravelly ground, miners must insure that the steel is locked in a hole, the entire machine can start to spin, wrapping up anything in its way.

4. A jackleg operator should not stand on the handle on the leg for more pressure or put excessive body weight on the drill. Extra weight can break the steel, bind the steel in the hole, or bow the steel which may cause the machine to heave the operator against the back. It is essential that jackleg-drill operators know that proper leg angle and leg pressure are the secret to operating a jackleg drill.

5. Jackleg-drill operators should, through the application of low pressure in a safe location, determine whether the machine is operating properly. Reversed control valves are an invitation

to the operator to get confused and move the machine down when it was intended to go up, and vice versa. Reversed controls are especially hazardous in a raise.

6. Some machines have a twist handle for applying air to the drills and the handle is flat against the machine. This location of the handle can cause the operators' hand to be caught between the handle and the leg. Control handles should angle up from the machine for hand safety.

7. Most of the miners believed that hurrying to complete a shift and inexperience were the probable basic causes of most injuries.

Safety is Common Sense

Human emotions aren't solids that can be dropped on one's toes, or jabbed with a pin, but they are real. All humans possess them. A sigh, cry, smile, or sneer are emotional manifestations.

Safety consciousness is like that. We are born with a natural desire to survive. From the first lusty howls of infancy for breath, to a matured effort to escape a dangerous predicament--we want to live. But, do we allow this instinct to influence our thought, acts, and decisions? For many, safety is a negative quantity.

For instance, a person lacking safety consciousness walks thoughtlessly under bad roof falling rock. To the observer, something happened. Another person cautiously approaches the same area, calculates the risk and hazards involved, acts accordingly and safely completes the shift. To the same observer, nothing happened. The significance of the caution (or common sense) that kept the person safe and averted an accident is completely disregarded.

While it may be normal to be impressed by dramatic effects, we must not overlook the fundamental benefits of common sense.

October 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

How To Get Along With People

KEEP skid chains on your tongue; always say less than you think. Cultivate a low, persuasive level in your voice. How you say it often counts more than what you say.

MAKE promises sparingly and keep them faithfully, no matter what it costs you.

NEVER let an opportunity pass to say a kind and encouraging thing to or about somebody. Praise work well done, regardless of who did it. If criticism is needed, criticize helpfully, never spitefully.

BE interested in others, interested in their pursuits, their welfare, their homes and families. Make merry with those that rejoice; with those who weep, mourn. Let everyone you meet, however humble, feel that you regard him/her as one of importance.

BE cheerful. Keep the corners of your mouth turned up. Don't focus excessively on pains, worries or disappointments. Laugh at good stories and learn to tell them.

PRESERVE an open mind on all debatable questions. Discuss, but do not argue. It is a mark of superior minds to disagree and yet be friendly.

LET your virtues, if you have any, speak for themselves, and refuse to speak of another's vices. Discourage gossip. Make it a rule to say nothing of another unless it is something good.

BE careful of another's feeling. Wit and humor at another's expense are rarely worth the effort, and may hurt when least expected.

PAY no attention to ill-natured remarks about you. Disordered nerves and a bad digestion can be caused by backbiting.

DON'T be too anxious about what is due you. Do your work, be patient and keep your disposition sweet, forget self, and you will be rewarded.

October 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Think Right Toward People

Your mind is a mental broadcasting station. This broadcasting system transmits messages to you on two equally powerful channels: Channel P (positive) and Channel N (negative).

Let's see how your broadcasting system works. Suppose that today your business superior (say, Mr. Jacobs) called you into his office and reviewed your work with you. He complimented you on your work, but he also made some specific suggestions on how you can do it better. Tonight it's only natural for you to recall the incident and do some thinking about it.

If you tune in Channel N, the announcer will be saying something like this: "Watch out! Jacobs is out to get you. He's a crab. You don't need any of his advice. To heck with it. Remember what Joe told you about Jacobs? He was right. Jacobs wants to grind you down like he did Joe. Resist him. Next time he calls you in, fight back. Better still, don't wait. Tomorrow go in and ask him what he really meant by his criticism..."

But tune in Channel P, and the announcer will say something along these lines: "You know, Mr. Jacobs is a pretty good fellow. Those suggestions he made to me seem pretty sound. If I put them to use, I can probably do a better job and position myself for an increase. The old boy did me a favor. Tomorrow I'll go in and thank him for his constructive help. Bill was right: Jacobs is a good man to work with..."

In this specific case, if you listen to Channel N, you're almost certain to make some bad, perhaps fatal, mistake in your relations with your superior. But if you were tuned to Channel P, you are definitely certain to benefit from your superior's suggestions, and at the same time draw yourself closer to him. He will appreciate that visit. Try it and see.

Bear in mind the longer you stay tuned to either Channel P or Channel N, the more interested you become and the harder it is to switch channels. This is true because one thought, positive or negative, sets off a whole chain reaction of similar thought.

You may, for example, start off with such a simple minor negative thought as a person's accent and find yourself soon thinking negatively about such unrelated topics as his political and religious beliefs, the car he drives, his personal habits, his relationship with his wife, even the way he combs his hair. And thinking this way surely won't get you where you want to go.

You own it, so manage your thought broadcasting station. When your thoughts turn to people, make Channel P your listening habit.

If Channel N cuts in, say stop. Then switch channels. To make the switch, all you must do is think of one positive quality about the individual. In true chain reaction style, this one thought will lead to another and another. And you will be glad.

When you are alone, you and only you can decide whether you will listen to Channel P or Channel N. But when you are talking with someone else, that person has a measure of control over how you think.

We must remember that most people do not understand the concepts of thinking right toward people. So it's a very common experience for people to come rushing to you, just aching to say something negative about a person you both know: a co-worker wants to tell you about the objectionable qualities of another employee; a neighbor wants to let you know the domestic problems of another neighbor; or a customer wants to itemize the faults of a competitor, whom you will call on next.

Thoughts breed like thoughts. There is real danger that if you listen to negative comments about another person, you too will go negative toward that person. In fact, if you are not on guard, you may actually find yourself adding fuel to the fire with "Yes, and that's not all. Did you hear..." type of comment.

These things backfire, boomerang.

There are two ways to prevent others from switching us from Channel P to Channel N. One way is to switch topics as quickly and quietly as possible with some remark like, "Pardon me, John, but while I think of it, I've been meaning to ask you...." A second way is to excuse yourself with a "Sorry, John, I'm late now..." or "I've a deadline to meet. Will you excuse me?"

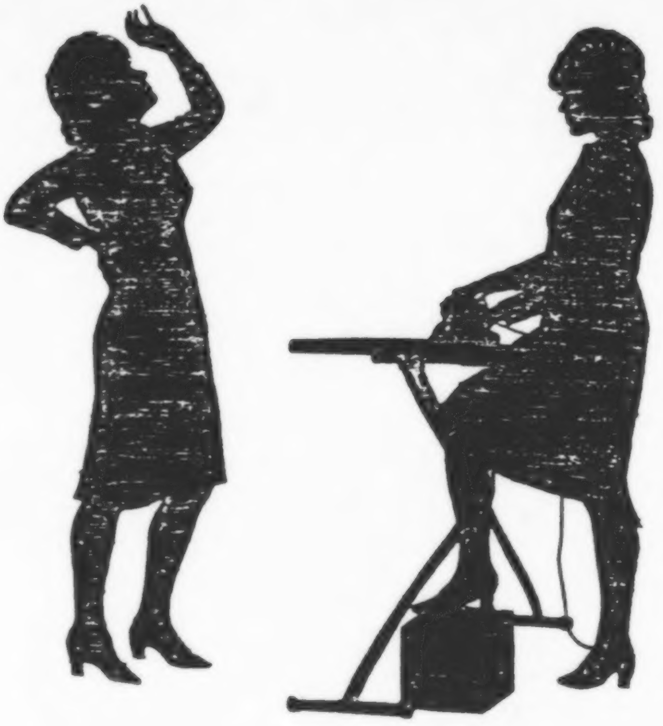
Make a forceful promise to yourself. Refuse to let others prejudice your thinking. Stay tuned to Channel P.

Once you've mastered the technique of thinking only good thoughts about people, greater success is guaranteed.

October 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

7 WAYS TO TAKE A LOAD OFF YOUR BACK!



1. STANDING

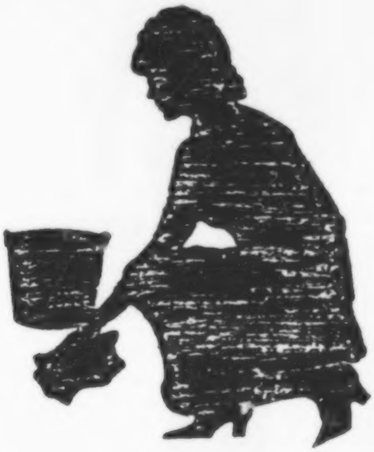
Many people confuse standing up straight with standing rigidly. Keeping all those muscles tense while you're standing on a hard surface is one of the worst things you can do for a bad back. Instead, keep your knees slightly flexed and your weight evenly balanced on each foot.

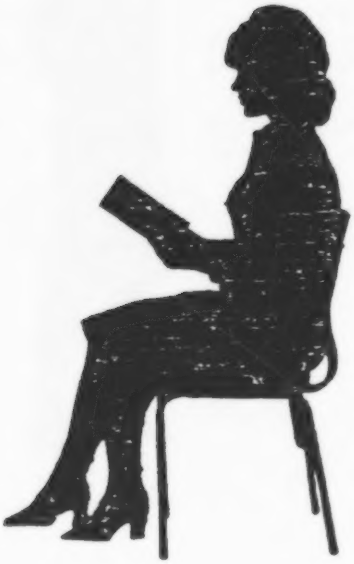
Shift your posture by resting one foot on a step or rail 2 or 3 inches higher than the ground for a few minutes. Then switch to the other foot.

Working at the kitchen counter can be particularly tiring, especially if the surface is too low to work at without bending slightly. If you must bend, bend from the hips, not the waist. The worst way to stand is leaning forward with your hips against the counter; it's liable to force you into a vulnerable, strained stance to maintain your balance.

Make a footrest out of a sturdy box that is about 8 inches high, and alternately rest one foot on it while doing counter work, ironing or a similar activity.

Whether standing still or walking, low heels are better for your back than high heels.





2. BENDING DOWN

Whether retrieving a lost paperclip or wiping up a spill, curb your impulse to lock your knees and bend from the waist. Instead, bend at the hips or knees. If you squat, keep your back fairly straight but not rigid.

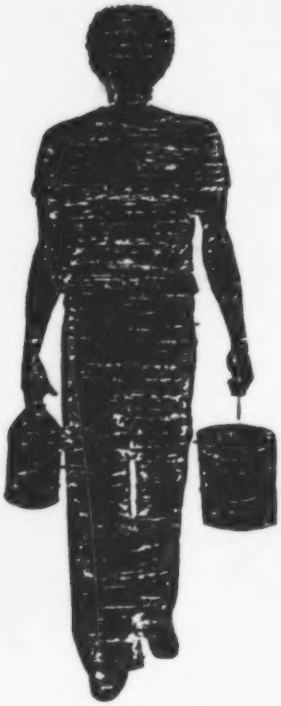
3. SITTING

Americans are notorious for the amount of sitting they do commuting to work, on the job and even around the house. And even though we do it so much, we tend to do it very badly. We slump when we should straighten, dangle our feet when we should have them firmly planted, and sink into cushions when our spine is really craving a firm seat and hard back.

Try to use chairs that have seats large enough for adequate support and that are close enough to the ground for your feet to easily rest flat. If the chair is too low, you may slump and bend your back. If it's too high, you may sway forward.

The best way to sit is with your buttocks well back in the seat and the small of your back supported. A firm pillow 1½ inches thick can be tucked behind your lower back for extra support.

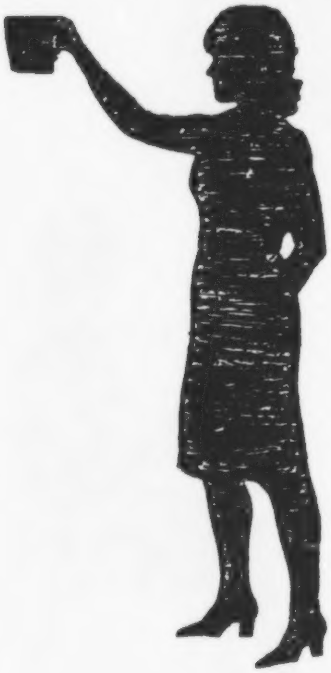
Keep your knees above your hips if possible to reduce the stress on your spine and the muscles and ligaments that support it.



4. WALKING AND CARRYING

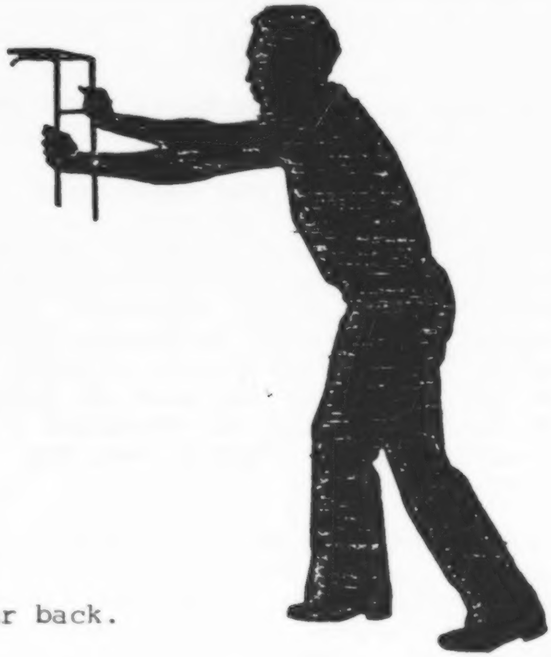
Don't hunch as you hurry down the street. The best posture is the one that comes closest to normal standing. Try to keep your shoulders level and your back straight.

Balance the load: Divide heavy loads into two bundles that can be carried at your sides, one in each hand. If a load can't be divided, hold it close to your body with elbows resting against your sides and the weight balanced evenly. If carrying a heavy load in one arm can't be helped, place it as close to the elbow joint as possible.



5. REACHING UP

The book you need is on the top shelf and the stepstool is across the room. The temptation is to stand on tiptoe and stretch--resist that thought! It's a quick way to wrench your muscles. If you can't take time to get the stepstool, hold your abdominal muscles tight and reach, don't stretch. The best rule is, keep things you use frequently at an easy-to-reach height.

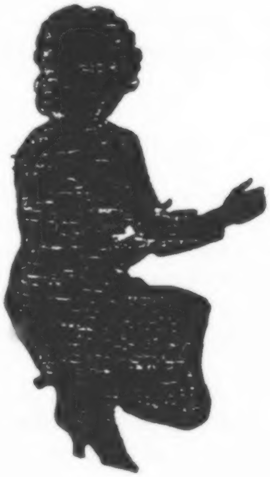


6. PUSHING AND PULLING

Always try to push rather than pull a load. One foot should be behind the other and your weight balanced between them. Again, keep your spine straight and use the force of your legs and arms to move the object.

If you must pull, assume a similar position and face the load. Trying to drag something behind you can strain your shoulder and neck as well as your back.

7. LIFTING



First, find out how heavy your load is by trying to lift a corner. If you can tell it's too much for you, get a helper, or two.

When you do it yourself, part your feet with one alongside the load and one behind. This gives you greater stability, and the rear foot is in position for the upward thrust of the lift.

Squat with your spine straight but not locked. Tuck in your chin and neck so they maintain the line of your spine.

Grip with your full palm, not just your fingers, around the corners of the load. Pull your elbows in to your body to give them as much strength as possible. That way they bear the strain, not your back.

Center your body weight over your feet and start the lift with a thrust of the rear foot.

THE LAST WORD

OCTOBER

The name of this month is from the Latin Octo, meaning eight; it was the eighth month of the year at Rome, but became the tenth when the beginning of the year was changed from March 1 to January 1. At the same time it was increased from 30 to 31 days. Several attempts were made to rename the month in honor of one or another of the emperors, and also in honor of Faustina, wife of Antoninus Pius; but those changes did not last.

"Halloween", an ancient celebration occurs during this month. Ancient Druids believed spirits of the dead roamed about the earth during this season. Bonfires were lighted to drive them away Spirits of the dead are roaming about us daily; we are better acquainted with them as accidents. Let us celebrate Halloween each day as an effort to drive out the accidents within the mining industry.

Reporting her husband, missing, the wife told the police, "He's bald and skinny, has no teeth and very little personality. In fact, most of him was missing before he was."

A man is as young as he feels after trying to prove it.

The worst thing about retirement is having to drink coffee on your own time.

Teenage girl to date: "Let me put it this way, if our romance were on Television, I'd switch channels."

"Advice" from a disgruntled friend: "Invest your money in taxes--they're sure to go up."

It Makes Sense

While most accidents are caused by the mistakes of people, a few involve failures of equipment. But even these mechanical failures can be traced back to someone's mistake, such as his not being alert to defects in equipment and not reporting them.

Your senses can help you spot something wrong.

Sight: Be on the lookout for accidents in the making.

Hearing: Listen for the offbeat sounds of defective or improperly adjusted equipment.

Smell: Your nose can help you detect most gas or chemical leaks, overheated bearings, burning brakes, arcing electricity.

Touch: Your hands can warn you of such things as excessive vibration or overheating.

And for good measure, there's your common sense.

DRIVING WITHOUT
SAFETY BELTS IS GOOD FOR:

Cuts
Bruises
Broken legs
All of the above

What's your excuse?

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MSHA, Holmes Safety Association
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NOVEMBER 1982

HOLMES SAFETY ASSOCIATION

BULLETIN

FOLLOW SAFETY
THRU in
-82-

L 38. 12:

HOLMES SAFETY ASSOCIATION

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NOVEMBER 1982

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"Ideas Start It All"

"Exercising Failure"

3. Safety Topic, "Adopt a Monthly Safety Slogan"

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"Leadership"

10. Safety Topic, "Work and Play"

11. Safety Topic, "Going Hunting?"

12. Poster, "We Need You to Volunteer"

13. Safety Topic, "Establishing Chapters or Councils of the Holmes Safety Association--for Assistance, you may contact these MSHA people."

14. The Last Word

15. Meeting Report Form (chapters only)

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WELCOME NEW MEMBERS

Consolidation Coal Company
Consol Mine No. 20
Four States, West Virginia

Consolidation Coal Company
Arkwright No. 1
Mona, West Virginia

Consolidation Coal Company
No. 79 Dent's Run
Mannington, West Virginia

International Safety Division
District 31-Safety
Fairmont, West Virginia

Norwood Minerals Inc.
Norwood Minerals
Granttown, West Virginia

Westmoreland Coal Company
Wentz Prep Plant
Big Stone Gap, Virginia

Westmoreland Coal Company
Wentz Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Pine Branch Prep Plant
Big Stone Gap, Virginia

Westmoreland Coal Company
Derby 5 Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Holton Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Arno Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Prescott Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Derby 4 Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Bullitt Mine
Big Stone Gap, Virginia

Westmoreland Coal Company
Bullitt Prep Plant
Big Stone Gap, Virginia

T.J. and M. Coal Company Inc
T.J. and M.
Grundy, Virginia

Sharon Coal Corporation
Sharon Coal
Grundy, Virginia

Daugherty Coal Company
Valley Mine
Masontown, West Virginia

Marrara Brothers Inc
Borgman No. 10/Mary Sara
Kingwood, West Virginia

Mary Ruth Corporation
Mary Ruth
Kingwood, West Virginia

WELCOME
NEW MEMBERS

L.C. Coal Company Inc
L.C. Coal
Kingwood, West Virginia

Magic Sewell Coal Company
Magic Sewell
Monterville, West Virginia

Ingram Coal Company
Ingram Coal
Beverly, West Virginia

National Construction Company
National Construction
Moorefield, West Virginia

Enoxy Coal Company
Upshur Strip
Beverly, West Virginia

Enoxy Coal Company
Upshur Prep Plant
Beverly, West Virginia

Maya Energies Inc
Coal Bank No. 9
Monterville, West Virginia

S.S. "Joe" Burford
Coal Bank No. 8 Mine
Monterville, West Virginia

Craft Coal Company
Craft Coal
Monterville, West Virginia

S.S. "Joe" Burford
S.S. "Joe" Burford Strip
Monterville, West Virginia

Sewell Mining Associates
Hickory Lick
Monterville, West Virginia

R and R Coal Contracting
R and R Coal
Beverly, West Virginia

Corley Trucking
Corley-Coal/Stone
Beverly, West Virginia

Sangamore Company Inc
Sangamore
Beverly, West Virginia

Rehoboth Coal Company
Rehoboth Coal
Elkins, West Virginia

Frontier Mining Inc
Frontier Mining
Grundy, Virginia

S.M.A. Coal Company
S.M.A. Coal
Grundy, Virginia

Red Dog Mining Corporation
Red Dog Mining
Grundy, Virginia

Industrial Electric Motors Inc
Industrial Electric-Service
Omaha, Nebraska

Blackfoot Coal Corporation
Blackfoot Coal
Sand Fork, West Virginia

United Coal Company
Wellmore Mine Maintenance
Big Rock, Virginia

United Coal Company
Wellmore Dock No. 1
Grundy, Virginia

United Coal Company
Wellmore Dock No. 4
Leetown, Virginia

United Coal Company
Wellmore Prep Plant No. 7
Big Rock, Virginia

WELCOME NEW MEMBERS

United Coal Company
Wellmore Prep Plant No. 8
Big Rock, Virginia

United Coal Company
Wellmore Plant No. 14
Big Rock, Virginia

United Coal Company
United No. 2
Conaway, Virginia

United Coal Company
National Strip
Conaway, Virginia

Blue Star Coal Corporation
Blue Star Coal
Grundy, Virginia

Coal Valley Mining Inc
Coal Valley Mining No. 5 Mine
Cedar Bluff, Virginia

B.P. and K. Mining Inc
B.P. and K. No. 4 Mine
Hurley, Virginia

R and E Coal Company Inc
R and E Coal No. 11
Hurley, Virginia

R and E Coal Company Inc
R and E Coal No. 12 Mine
Hurley, Virginia

Rogers Coal Company Inc
Rogers Coal No. 6
Wolford, Virginia

Raleigh Coal Sales Company
Raleigh Coal Sales
Naoma, West Virginia

Forman Construction Company Inc
Forman Construction
Kingwood, West Virginia

Coal Systems Limited Mine 118-114
Thin Seam Miner
Kingwood, West Virginia

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

U.S. Department of Labor NEWS

Winners of 1981 Mine Safety Awards

A number of mining operations were awarded Sentinels of Safety trophies and certificates recently for having outstanding safety records last year. The annual competition is sponsored by the Department of Labor's Mine Safety and Health Administration (MSHA) and the American Mining Congress.

Winning mines in each of six categories--underground coal surface coal, underground metal, underground nonmetal, and open pit mines, and open pit quarries--will receive bronze "Sentinels of Safety" statuettes at formal ceremonies. Assistant Secretary of Labor for Mine Safety and Health Ford B. Ford sent congratulatory letters to the winning mine companies, and safety certificates were awarded to employees of the winning mines.

In a separate category of competition, sponsored by MSHA, two sand and gravel operations received similar awards for their outstanding safety achievements.

"The Sentinels of Safety Award Program demonstrates the continuing cooperation between the Nation's mining community and the government in promoting mine safety and health," Assistant Secretary Ford said. "Each employee who contributed to this exemplary group achievement in the prevention of accidents should be commended."

The competition was open to U.S. mines whose reported employment data for each active operating period during the year showed that the mine had achieved at least 30,000 employee work-hours without an injury resulting in a lost workday. MSHA identifies the eligible mines and requests that each operator verify its employment and injury data recorded in MSHA files. Certificates of achievement in safety are then awarded to mining operations meeting the contest's requirements. The top mines are those with the highest number of safe employee working hours.

The first-place winning mines with injury free status (no lost workdays) in the Sentinels of Safety program are:

Underground Coal Mine--Jericol Mining, Inc., Holmes-Mill, KY.
(No. 1 Darby Mine)

Surface Coal Mine--Consolidation Coal Co., Stanton, N.D.
(Glenharold Mine)

Underground Metal Mine--St. Joe Minerals Corp., Viburnum, MO.
(Brushy Creek Mine)

Underground Nonmetal Mine--Duval Corp., Carlsbad, N.M. (Nash Draw Mine)

Open Pit Mine--Occidental Chemical Co., White Springs, FL.
(Suwannee River Mine)

Open Pit Quarries--Traprock Ind., Inc., Kingston, N.J. (Kingston Quarry)

Sand and Gravel Dredge--Standard Sand and Silica Co., Davenport, FL.
(Standard Mine)

Sand and Gravel Open Pit--Glenstar Stone Products Co., Baltimore, MD.
(White Marsh Plant)

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

IDEAS START IT ALL!!!

Consider how the people of Colonial times would have reacted if they had been told of aircraft flying across the ocean to Europe in just a few hours - a journey they knew took many weeks in a sailing ship.

A generation ago the public gaped in disbelief at science fiction movies with rocket ships in space and trips to the moon.

The people of the 21st century will accept as routine many things which today are considered fantastic.

Your imagination, ideas and suggestions can spark new achievements and perhaps affect not only your own life but future generations as well.

Exercising Failure

Exercising Failure: The only exercise some people get is jumping to conclusions, copying somebody else's work, pushing their luck, dodging the issues, passing the buck, running down others, and sidestepping their responsibilities. -- How do you exercise?

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

ADOPT A MONTHLY SAFETY SLOGAN

THIS SPECIAL FORM IS BEING DISTRIBUTED FOR YOUR USE IN AN ATTEMPT TO AID SUPERVISORS IN THEIR EFFORTS TO OBTAIN THE COMPLETE COOPERATION OF THEIR WORKERS AND AS A POSSIBLE AID IN YOUR SUPERVISORY PROGRAM

IT MIGHT BE WELL TO CONSIDER HOLDING, IN ADDITION TO YOUR REGULAR SAFETY MEETING, A 5-MINUTE TALK ON ANY OF THE MONTHLY SAFETY SLOGANS.

MONTH	SLOGAN	5-MINUTE TALK	NO. EMPLOYEES CONTACTED
	SOUND THE ROOF		
	PROTECT YOUR EYES		
	LIFT PROPERLY		
	CHECK MACHINE GUARDS		
	STOP BELTS WHEN CROSSING		
	CHECK FIRE EQUIPMENT		
	CHECK CLEARANCE		
	TAKE DOWN OVERHANGS		
	LISTEN FOR DANGEROUS SOUNDS		
	AVOID TRAPS		
	REPLACE GUARDS		
	DON'T RIDE BETWEEN MOVING TRIPS		
	TEST FACE AND RIBS DON'T FORGET ROOF		
	CLEAN UP		
	NO HORSEPLAY		

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Technology News

From the Bureau of Mines, United States Department of the Interior

Better Stopping Construction Techniques Reduce Ventilation Air Leakage

Objective

Provide better ventilation for mines by reducing air leakage around stoppings.

Approach

Most stoppings are constructed of concrete blocks and trowelled-on mortar and are not very airtight. Bureau of Mines research has shown that brushing on modified mortar containing fiberglass and/or other additives, that enhance strength and adhesion, minimizes air leakage around and through the stoppings. Airtightness is an important factor in building stoppings since an airtight stopping will provide for more efficient ventilation airflow and more cost-efficient use of the mine's ventilation system.

How the New Technique Works

After broken floor and rib material is removed, the stopping faces are covered with one or two coats of modified

Mine workers brush-applying modified mortar on a concrete block stopping.

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mortar, depending on the air pressure differential at the location and the airtightness required for the stopping. With the brush-on technique, the concrete blocks that make up the stopping need not be perfectly level. The increased strength of the stopping results not only from the more uniform face coatings, but also from mortar forced into misaligned joints. Brushing also covers holes and cracks in the block more effectively than trowelling. The stopping-to-roof and stopping-to-rib junctions are sealed more thoroughly because it is easier to round or cove the corners. The relatively smooth finish also makes any imperfections more noticeable.

Test Results

In laboratory tests where modified mortars were brushed on only the block faces, the construction was stronger than dry-stack, trowelled-on block faces. In no case was strength lost by brushing rather than trowelling-on the modified mortars.

Modified mortar also was applied experimentally to stoppings in an operating coal mine. Since conventional stoppings in this mine had mortar trowelled on only one face, the modified mortar was brushed on only one face of the experimental stoppings. Average construction times for stoppings built for various air pressure differentials ranged from five to twelve man-hours.

Air leakage tests were performed on all the modified mine stoppings within a few weeks of their construction. On the basis of standardized air leakage measurements of conventional stoppings existing in the mine, the brush-on techniques substantially reduced the average volume of air leakage around the new stoppings. Air leakage was reduced by 50% on stoppings built for low-pressure areas (less than two inches water gage), by 65% for medium-pressure areas (two to five inches w.g.), and by 94% for high-pressure area stoppings (over five inches w.g.).

Six months after construction, another air leakage test was conducted on these stoppings. Test results showed that the modified stoppings all exhibited less air leakage than when new, possibly because any small holes that were in the faces had become plugged with dust. The brushed-on surfaces appeared solid, with little cracking or flaking of the mortar. Air leakage that did occur resulted from the inability to form a perfect seal around the stopping perimeter. Leakage was now reduced by 63% around low-pressure stoppings, by 77% around medium-pressure stoppings, and by 96% for high-pressure stoppings.

For More Information

These construction techniques were developed and tested under a Bureau of Mines contract. An article in *Coal Age* magazine, April 1982, details the construction techniques and their testing. Copies of the article or further information concerning the stopping construction can be obtained from the technical project officer, Mr. Robert J. Timko, at the U.S. Bureau of Mines, Pittsburgh Research Center, P.O. Box 18070, Pittsburgh, Pennsylvania 15236, or telephone 412/675-6684.

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Barricading

Today we will be concerned with erecting a barricade as a lifesaving measure against deadly gases that follow most mine fires and explosions. A barricade must be gastight, and the barricaded place must not have been contaminated with gases before put into use as a refuge.

When a fire or an explosion occurs in a mine, undoubtedly the first impulse of the survivors is to dash for the nearest exit from the mine. Persons naturally try to get out as quickly as possible, but frequently in making their way to the surface they rush into deadly accumulations of gas. For this reason I would like to discuss a few pointers on constructing barricades.

1. When entrapped by gases from mine fires or explosions, keep uppermost the thought of building a barricade or bulkhead and collect tools, timbers, canvas, water, dinner buckets, and anything that might be useful.

2. As soon as possible, a suitable place should be chosen for erecting a barricade and its construction should be started without delay, since deadly gases often travel quickly. An efficient barricade can be erected in 30 minutes to 2 hours, depending upon conditions.

3. The ventilation should be short circuited as soon as possible by opening doors or destroying stoppings, and temporary barricades should be erected by hanging brattice cloth or moving a door to a new place across an entry. The permanent barricade should be started about 50 feet from the temporary construction.

4. As much territory as possible, such as entries, rooms, or crosscuts should be included in the barricaded area to provide a maximum quantity of air.

5. Before constructing barricades, make sure that there are no other openings or connections with other workings through which deadly gases could enter.

6. The stoppings must be airtight. Board stoppings covered by canvas or damp brattice cloth can be made tight enough to exclude dangerous gases.

7. All holes in the barricade should be stopped with rags, cloth, or other similar material.

8. After a barricade has been built, the persons should keep as quiet as possible since a person uses several times as much oxygen when exerted as when he keeps absolutely quiet. However, one person should walk around occasionally to mix the air. The persons should not congregate in one place.

9. All flame lamps should be extinguished to conserve oxygen.

10. Food and water should be conserved as long as possible.

11. A sign should be placed outside the first stopping, if more than one is built indicating that persons are behind it.

12. If anyone has a chance, the oxygen tank should be picked up from the welding station to replenish the oxygen inside the barricade.

13. All of us should familiarize ourselves with the entries, rooms, and escapeways from the mine. Many miners have lost their lives by not knowing the location of the intake and return entries.

THE ABOVE ARE JUST A FEW OF THE THINGS TO CONSIDER IN SAVING LIVES IN MINING EMERGENCIES.

One for the Road

The easy way out is to blame traffic difficulties on the other driver. "But, to other drivers, YOU are the other driver."

So, always make sure that the safest driver on the road is the one following the car ahead!"

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Discipline

Discipline is not the dirty word that some people think it to be. It means orderly and intelligent conduct during working hours. It is the product of instruction - training - guidance - understanding and mutual respect between those who work together - you and your coworkers.

It means coordination of people - materials - machines - devices and power; for your purpose - production.

It means systematic - safe planning of the job - the time and equipment usage.

1. The proper use of discipline is:
   - a. Constructive training.
   - b. Teaching.
   - c. Guidance.
2. Its purpose is to:
   - a. Eliminate physical labor and unproductive work.
   - b. Make intelligent use of time.
   - c. Control cost of production.
   - d. Promote safe working practices.
3. Discipline is not something that can be enforced:
   - a. By issuing orders.
   - b. Or established by publishing a set of rules.
4. Discipline is:
   - A. THE SYSTEMATIC TRAINING OF EMPLOYEES TO DO THEIR JOBS SAFELY AND EFFICIENTLY.

SAFETY BY INTENT - NOT BY ACCIDENT

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

ARE RINGS INVOLVED IN ACCIDENTS?

QUESTION: Do you have any statistics on serious injuries involving finger rings, particularly wedding rings, which are heavier and stronger than most regular rings? We have experienced several minor injuries to some of our people as a result of wearing rings and wondered if you could supply us with statistics on this problem.

ANSWER: We have no statistics as such on injuries resulting from the wearing of rings, but we do have a number of case histories describing serious injuries resulting from the wearing of rings. Following are descriptions of some of the more serious cases:

1. Man caught ring on bolt as he descended a ladder and amputated his finger.

2. Man was crushed to death when his wedding ring caught on the open grill work on an elevator door while the cage was descending.

3. A tree surgery employee slipped from a truck, his ring finger caught on the sideboard, causing amputation of the finger.

4. Man working on conveyor--ring caught on moving part and pulled his hand into conveyor.

5. Battery man shorted a battery through a ring and a pair of pliers he was holding, resulting in a severe burn.

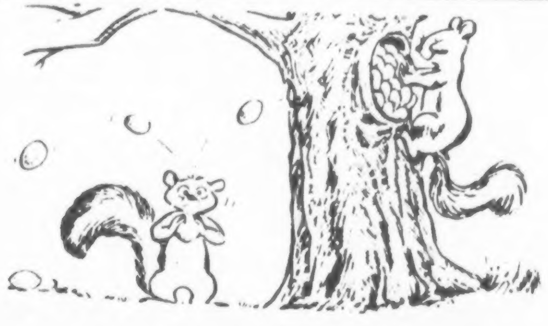
6. Ring caught on projection when man jumped from truck; injury was serious enough to require amputation.

7. Man fell from step ladder, wedding ring caught on projecting metal strap, bent out of shape, and cut his finger severely. The finger had to be amputated later.

As indicated by these case histories, rings are involved in a number of serious injuries. Thus, many companies have a general rule against wearing of rings and jewelry for production workers. As outlined in the cases mentioned, moving machinery was not the major source, so it is advisable if you are thinking about developing rules, to include people who may not be working around moving machinery.

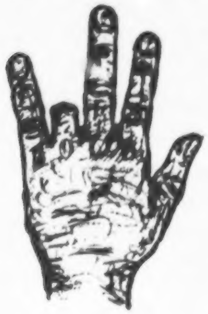
Where wedding rings are permitted to be worn, some safety professionals recommend slotting the ring in three places. It does not spoil the ring and can be done by any jeweler with a fine saw. Thus, when the ring is caught on a projection, it will spread open and spare the finger.

THE BEST APPROACH TO THIS PROBLEM IS TO BAN THE WEARING OF JEWELRY. ARE RINGS INVOLVED IN ACCIDENTS? YOU BE THE JUDGE.

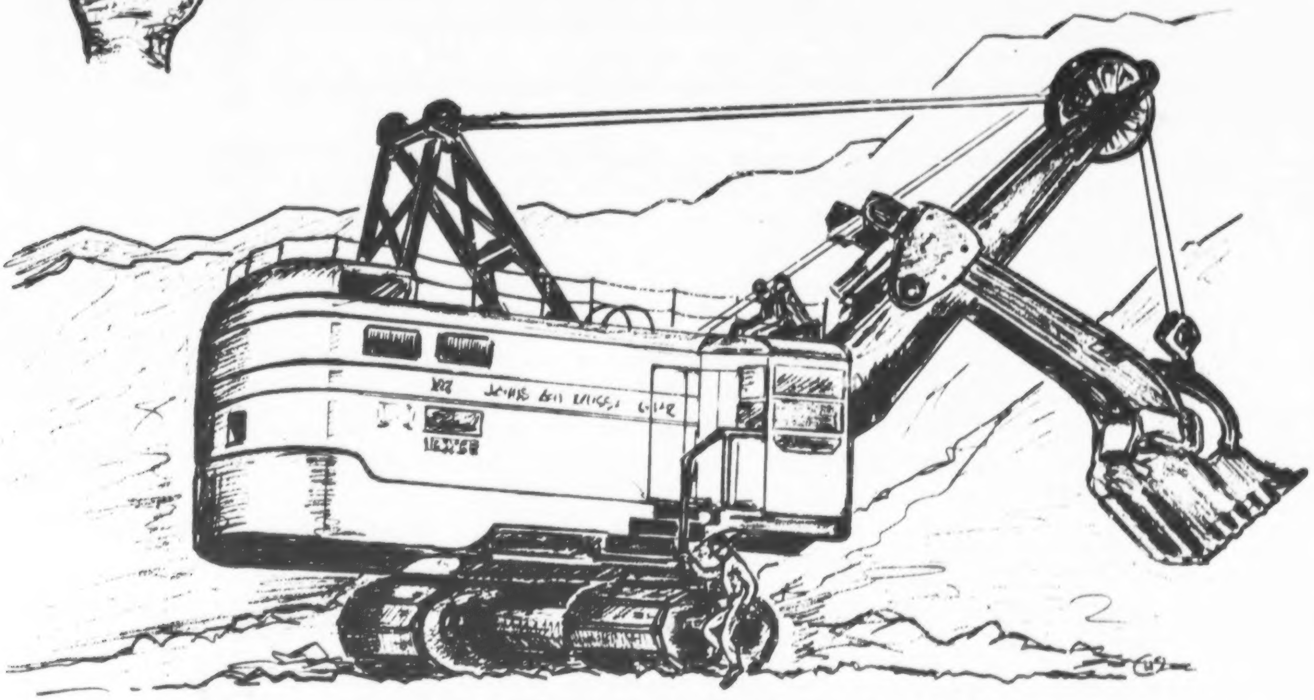


ACCIDENTS ARE ALWAYS UNEXPECTED

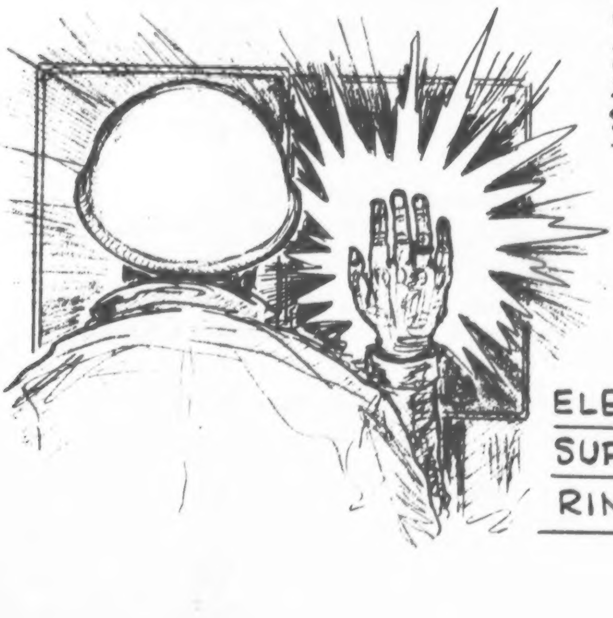
RINGS ARE A HAZARD AT WORK



MANY MINOR INJURIES TO FINGERS BECOME AN AMPUTATION DUE TO A RING BEING INVOLVED



IN CLIMBING DOWN FROM SHOVEL WORKMAN PLACED HAND ON BOTTOM STEP. RING CAUGHT ON EDGE OF STEP RESULTING IN AMPUTATION



ELECTRICIAN WORKING ON PANEL SUFFERED A SEVERE BURN WHEN HIS RING CAUSED A SHORT AND MELTED

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Winter Driving

Winter is upon us. Getting out on the road is dangerous enough under ordinary conditions, but winter driving really complicates matters. Now is the time to get prepared before it is too late. Following are some pointers on winter driving:

Antifreeze - Antifreeze should be checked for adequacy so that freeze-ups will be eliminated.

Tires - You need good tread on your tires to bite and grip. Maintain the recommended pressure in the tires at all times. Contrary to a belief of many, low pressure does not improve traction.

Brakes - Check and adjust brakes if necessary. An uneven pull can twist you into a skid.

Windshield - Good wiper blades are a must, with proper arm action to prevent streaking. Check washer solution and make sure that defroster is operating properly.

Exhaust - Inspect muffler and tailpipe for leaks. Exhaust leaks can be deadly.

Battery - Cold weather saps battery power. Stalls not only are inconvenient, but hazardous in winter traffic.

Emergencies - Prepare for emergencies--flare kit, chains, flashlights, shovel, etc. If the worst happens, you should be prepared.

Following Distance - You need a much bigger safety cushion in winter in case you have to make a sudden emergency stop on ice.

Imaginary Speed Limit - Remember that in winter, half the posted speed limit may be too fast. Slow down if the roads are not in perfect shape.

Headlights - Let others see you. Use low beam headlights when driving in snow or fog--even during the day. Use headlights, not parking lights. If stalled or parked, use emergency flashers.

Cautious Steering - Oversteering on ice causes most skids. Anticipate lane changes and turns in order to make them gradually.

Take Time - Do not count on getting anywhere in a hurry in the winter. Speed limits are for perfect, dry conditions. On snow, ice or water-covered roads, driving at even half the speed may mean danger.

Think Ahead - Anticipate turns, hills, and adverse conditions. Do not make sudden steering movements.

Caution at Intersections - Approaches to intersections are often packed and polished. Take it slow and easy entering an intersection, so that you don't slide into cross traffic. Side streets are especially dangerous, and they are usually the last to get salted.

Facts About Ice -

Ice is about twice as slippery at 30 degrees as it is at zero degrees. Also, ice lasts longer on bridges and in shaded areas, so be extra alert in these areas. If you hit an unexpected ice patch, do not try to brake, accelerate, or steer. Maintain speed and let your car "roll" through the slippery area. One source of information lists the braking distance, with snow tires, at 20 miles per hour, after you touch the brake on a glare of ice at 20 degrees as 174 feet. Therefore you can see the reason for a slow cautious speed.

TAKE IT EASY - SAVE LIVES

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

LEADERSHIP

Leadership is the essence of supervision. One definition of a leader is, "Someone who knows what is to be done--How - When - Where to get it done, and Who is to do it, and then sees that it is done." To do all of this you must depend on your know-how and the cooperation, ability, and attitudes of your workers--your relationship with them, your ability to give work orders properly (such as "will you do this?") in simple, specific terms the worker will understand.

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Work and Play

For many people there seems to be no distinction between work and play. For some it is work to play and others seem to make play of work.

Take golf, for example. Some golfers leave the course completely unhappy, winded, with tension built up and on the verge of a high blood pressure attack. Here was a day taken out for play that ended up more exasperating than a day at work.

Another example is mowing the lawn. This is a tough subject to put into a category, but usually grass cutting is considered work. Yet many people have a good time cutting grass. For them it is exercise, relaxation and an art.

The nineteenth century writer, John Ruskin, offered as good a definition of play and work as one can find. He called "play" an exertion of the body or mind, made to please ourselves, and with no determined end. Work he described as a thing being done because it ought to be done, and with a determined end.

Play, he maintains, is as hard work as anything else, only play amuses. If play were ordered to be done, as for instance, for health's sake, it would no longer be amusing and would become work. If a doctor told us to walk a mile and a half each day for the exercise, we might object. However, if a stick were put in our hand and a ball placed on the ground and we were told to drive the ball into a hole 400 yards away (golf) we would consider the mile and a half walk as play.

Business, also, is a game or it is work. Many of us have seen the person who makes it seem like an enjoyable pastime to work. We have also seen the person who hates every minute that is put into work. To one, work seems a game; to the other it is sheer drudgery.

The best thing about enjoying your work is that it no longer seems like work. The time goes by quickly and your interest in a job well done increases with your experience. The person who makes work pleasurable is the good business person, the good sales person, the good laborer.

Whether it be work or play, it is a state of mind. Everyone should have some enjoyment from their job or else they are not fitted for that job. How about you? Are you making a game out of your job, or is your work really a drudgery to you?

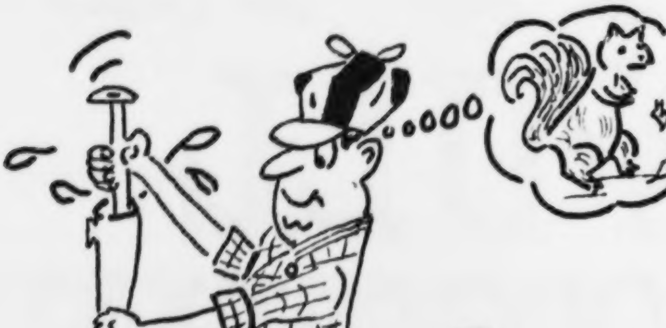
November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Going Hunting?
Take Safety With You and Come Back Alive

The facts show that hunting accidents are caused by lack of knowledge or failure to apply knowledge. For your own enjoyment, peace of mind, and the fact that your life or the life of another hunter may depend on it, follow the safety rules:

1. Wear bright colored clothing when hunting. Blaze orange is recommended.
2. Be certain your gun is unloaded before placing it in your vehicle. Dismantle the gun, if possible.
3. Load your gun only after you have entered the woods.
4. Make sure the bore is clear before loading.
5. Carry and use only ammunition for which the gun is designed.
6. Always make sure of your target before shooting. Never shoot at unidentified noises or what may appear to be game.
7. Check with your companions and be certain of which area each will cover.
8. Always carry your gun on "safe" or with the hammers down until aiming to shoot.
9. Unload or break open your gun before going over, under, or through a fence or other barriers.
10. Never place a gun in a position where it can possibly fall and discharge.
11. Do not rest your gun muzzle on your foot or lean on the muzzle.
12. Last but NOT least, maintain complete control of yourself. NEVER drink alcoholic beverages while hunting. A drunken hunter is as dangerous as a drunken vehicle driver.



HOLMES SAFETY ASSOCIATION

WE NEED YOU

TO VOLUNTEER

IF YOU ARE RETIRED, OR WORKING, AND HAVE SOME EXTRA TIME TO SPARE, MSHA AND THE HSA NEED YOUR EXPERIENCE. WE HAVE MANY INTERESTING PROGRAMS THAT WOULD APPRECIATE YOUR HELP.

FOR FURTHER INFORMATION, CALL OR WRITE TO:

John English, Director, Educational
Policy & Development, MSHA
4015 Wilson Blvd., Arlington, VA
(703) 235-1515 22203

LET'S ALL PULL TOGETHER!

November 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Establishing Chapters or Councils of the Holmes Safety Association

Please contact any of the following within your District or Subdistrict for help in establishing your chapters or councils of the Holmes Safety Association.

William H. Hoover, Chief
Office of Holmes Safety
Association, MSHA
301 West Congress
Room 7K Box FB-52
Tucson, Arizona 85701

Phone: 602/792-6631
FTS 762-6631

Linda M. Lofstead
Holmes Safety Association
MSHA
4800 Forbes Ave. Room 185
Pittsburgh, Pennsylvania
15213

Phone: 412/621-4500 extension
8649 or 8650
FTS 721-8649 or 8650

Coal Mine Safety and Health District Managers and Subdistrict Managers

J.B. Shutack District Manager District 1	Penn Place, 20 N. Pennsylvania Ave. Wilkes-Barre, PA 18701	FTS 592-6321, or 6201 (717)826-6321
D.W. Huntley District Manager District 2	4800 Forbes Ave. Pittsburgh, PA 15213	FTS 721-8363, 8380, 8369 (412)621-4500
J. Garcia(Acting) Subdistrict Manager	200 James Place Monroeville, PA 15146	FTS 721-8604, 05, 06 (412)373-7600
W.R. Devett Subdistrict Manager	Sunray & Goucher Johnstown, PA 15905	FTS 723-9463, (814)533-4463
R. Keaton District Manager District 3	5012 Mountaineer Mall Morgantown, WV 26505	FTS 923-4277 (304)291-4277

Coal-Continued

J.M. Krese District Manager District 4	P.O. Box 112 Mount Hope, WV 25880	FTS 924-1461, 1466 (304)877-6405
J. Rutherford Subdistrict Manager	P.O. Box 112 Mount Hope, WV 25880	FTS 924-1461 (304)877-6405
C.T. Spangler Subdistrict Manager	110 Gott Rd. Princeton, WV 24740	(304)425-8161
Fred Casteel Subdistrict Manager	P.O. Box 8 Madison, WV 25130	FTS 924-1218 (304)369-1502, 2547
R.G. Ross District Manager District 5	P.O. Box 560 Norton, VA 24273	(703)679-0230
Bill W. Clemons Subdistrict Manager	P.O. Box 560 Norton, VA 24273	(703)679-0230
J. McManus Subdistrict Manager	Drawer AA, 102 Augusta Ave. Richlands, VA 24641	(703)963-6085
L.D. Phillips District Manager District 6	218 High St. Pikeville, KY 41501	(606)437-9616
Clyde Turner Subdistrict Manager	218 High St. Pikeville, KY 41501	(606)437-9616
Ronald Wilder Subdistrict Manager	MSHA-Coleman Building 1568 F.M. & Stafford St. Paintsville, KY 41240	(606)789-6994
J. Spicer District Manager District 7	Box 572 Barbourville, KY 40906	(606)546-5123
T.R. Mark Subdistrict Manager	616 Manchester St. Barbourville, KY 40906	(606)546-5161
J. Weekly Subdistrict Manager	228 W. Valley Ave. Homewood, AL 35209	FTS 229-1501 (205)254-1501
Dwight W. Greenlee Subdistrict Manager	R.R.3, Box 550-F Hazard, KY 41701	(606)439-2396

Coal-Continued

M.S. Childers District Manager District 8	P.O. Box 418 Vincennes, IN 47591	FTS 335-6334 (812)882-7616
C. Adams Subdistrict Manager	P.O. Box 370 Benton, IL 62812	FTS 958-6676 (618)439-4355
W. Holgate(Acting) Subdistrict Manager	50985 National Rd. St. Clairsville OH 43950	FTS 923-1043, 1044 (614)695-2297

J.W. Barton District Manager District 9	P.O. Box 25367 Denver, CO 80225	FTS 234-2293 (303)234-2293
William Bazo Subdistrict Manager	P.O. Box 25367 Denver, CO 80225	FTS 234-2460 (303)234-2460
J. Lamar Bishop Subdistrict Manager	575 E. 1st South, Drawer J Price, UT 84501	(801)637-3051, 3086

J. Breedon(Acting) District Manager District 10	P.O. Box 473 Madisonville KY 42431	(502)821-4180
Hudson Sorrel Subdistrict Manager	P.O. Box 473 Madisonville, KY 42431	(502)821-4180
Bobby Hill(Acting) Subdistrict Manager	509 S. 3rd. St. McAlester, OK 74501	(918)423-5966

Metal and Nonmetal Safety and Health District Managers and Subdistrict Managers

Northeast

Michael Trainor, District Manager Pittsburgh District Office	4800 Forbes Ave. Pittsburgh, PA 15213	FTS 721-8291 412/621-4500 extension 291
Raymond C. Austin, Subdistrict Manager Pittsburgh Subdistrict Office	4800 Forbes Ave. Pittsburgh, PA 15213	FTS 721-8297 412/621-4500 extension 297

Metal and Nonmetal-Continued

Harold L. Thompson, Subdistrict Manager Pittsburgh Subdistrict Office	P.O. Box 1894 Albany, NY 12201	FTS 562-3648 518/472-3648

Southeast

Horst S. Gottschalk, District Manager Southeastern District Office	228 W. Valley Ave. Room 102 Birmingham, AL 35209	FTS 229-1510 205/254-1510
Claude N. Narramore, Subdistrict Manager Birmingham Subdistrict Office	228 W. Valley Ave. Room 102 Birmingham, AL 35209	FTS 229-1507 205/254-1507
Fred Juopperi, Subdistrict Manager Knoxville Subdistrict Office	301 W. Cumberland Ave. Room 223 Knoxville, TN 37902	FTS 854-4581 or 4583 615/525-9115

North Central

Richard Vik, District Manager North Central District Office	228 Federal Bldg. Duluth, MN 55802	FTS 783-9448 218/727-6692 extension 448
Robert L. Moore Subdistrict Manager Duluth Subdistrict Office	228 Federal Bldg. Duluth, MN 55802	FTS 783-9451 218/727-6692 extension 451
Ronald P. Hollenbeck, Subdistrict Manager Vincennes Subdistrict Office	P.O. Box 927 Vincennes, IN 47591	FTS 335-6337 812/882-0696

South Central

Wayne Kanack, District Manager South Central District Office	1100 Commerce St. Room 4C50 Dallas, TX 75242	FTS 729-8401 214/767-8401

Marvin W. Nichols, Subdistrict Manager Dallas Subdistrict Office	1100 Commerce St. Room 4C50 Dallas, TX 75242	FTS 729-8402 214/767-8402
Terry E. Phillips, Subdistrict Manager Rolla Subdistrict Office	P.O. Box 1156 Rolla, MO 65401	FTS 277-0994 314/364-8282

Rocky Mountain

William C. Gardner, District Manager Rocky Mountain District Office	P.O. Box 25367 DFC Denver, CO 80225	FTS 234-3421 303/234-3421
Jack S. Petty, Subdistrict Manager Rocky Mountain Subdistrict Office	P.O. Box 25367 DFC Denver, CO 80225	FTS 234-2271 303/234-2271
Gilbert Plimpton, Subdistrict Manager Rocky Mountain Subdistrict Manager	307 W. 200th South Suite 3003 Salt Lake City, UT 84101	FTS 588-5385 801/524-5385

Western

Thomas C. Lukins, District Manager Western District Office	620 Central Ave. Bldg. 7 Alameda, CA 94501	FTS 536-7457 415/273-7457
Vernon R. Gomez, Subdistrict Manager Phoenix Subdistrict Office	2721 N. Central Ave. Suite 900 Phoenix, AZ 85004	FTS 261-2030 602/241-2030
Kenneth Russell Subdistrict Manager Bellevue Subdistrict Office	117-107th Ave. NE, Room 100 Bellevue, WA 98004	FTS 399-5455 or 7037 206/442-5455 or 7037

THE LAST WORD

NOVEMBER

In the old Roman calendar, November was the ninth month, as its name indicates; but it is now the eleventh, owing to the change of the year's beginning from March to January. At the same time, the number of days was increased from 29 to 30. It is said that the Roman Senate proposed to rename the month in honor of Tiberius, who succeeded Augustus as emperor; but he declined, saying, "What will you do, Conscript Fathers, if you have thirteen Caesars?"

Thanksgiving, our harvest festival, is celebrated during this month on the fourth Thursday. During this celebration, we give thanks to Nature's annual bounty and other marks of God. The prevention of accidents requires considerable know-how, which is attained through education and experience. This know-how is indeed a mark of God's favor.

The Good Motorist's Prayer

"Dear Lord, before I take my place
Today behind the wheel ...
Please let me come with humble heart
Before Your throne and kneel...
And pray that I am fit to drive
Each busy thoroughfare ...
And that I keep a watchful eye ...
Lest some small child be there.

"And keep me thinking constantly...
About the Golden Rule...
When driving past the playground
zones ...
Or by some busy school...
Then when I stop to give someone
The right to cross the street...
Let me my brother's keeper be...
And spare a life that's sweet.

"Please let me feel this car I
drive...You gave me to enjoy...
And that its purpose is to serve
Mankind -- but not destroy."

Train Children to Cross Streets

The danger in a school crossing program is that parents and children may tend to expect too many added services from this protection. The crossing guards and police officers stationed at hazardous school crossings help children cross safely.

They are not there to spend their full time instructing every child in safe living. This is still the parents' job. Schools help. Crossing guards help. Police officers help. But the prime responsibility always has and always will rest with parents.

The school crossing program is one of assistance. It can't possibly do the whole job alone; nor is it intended to do it. Some day many of this year's school children may have to cross one of these intersections when no guard or police officer is on duty. On that day, the child who is well-trained is the child who will cross safely.

Drivers, too, share in the responsibility to protect our school children. Whether or not there is a crossing guard or police officer stationed near the school, drivers must slow down when children are nearby. The technicality of legal liability makes little difference after a child has been injured.

--Milwaukee Safetygram

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MSHA, Holmes Safety Association
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Denver, Colorado 80225

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HOLMES SAFETY ASSOCIATION

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HOLMES SAFETY ASSOCIATION

in this issue....

December 1982

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2. Safety Topic, "Welcome New Members"
3. Safety Topic, "Questions and Answers of Rescue and Recovery Operations Following Coal Mine Fires and Explosions"
4. Safety Topic, "The Silent Killer"
5. Safety Topics, "Don't Overlook "Minor" Accidents"
   "Ten Commandments of Safety"
6. Safety Topic, "Take Care To Insure a Happy Holiday"
7. Safety Topic, "Before Christmas"
8. The Last Word
9. Meeting Report Form (chapters only)

Season's Greetings

HSA

HOLMES SAFETY ASSOCIATION

And May the

New Year

KEEP YOU & FAMILY
SAFE AND SOUND

December 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

WELCOME NEW MEMBERS

Grace Coal Corporation
Grace Coal
Haysi, Virginia

TJ and PE Coal Company Inc
TJ and PE
Hurley, Virginia

Sharon Coal Company
Sharon No. 1 Strip
Reedsville, West Virginia

Sharon Coal Company
Sharon No. 2 JR Strip
Reedsville, West Virginia

Duncan Coal Company
Duncan
Kopperston, West Virginia

Harrison Mine Company
Harrison Mine
Oceana, West Virginia

Pond Fork Company
Pond Fork No. 1
Oceana, West Virginia

Calloway Mining Company
Calloway Mining
Oceana, West Virginia

Elbow Mining Company
Elbow Mining
Princeton, West Virginia

True Energy Company
True Energy
Princeton, West Virginia

Permac Incorporated
Permac
Oakwood, Virginia

Race Fork Coal Company
Race Fork Coal
Hurley, Virginia

R and D Coal Company
R and D No. 29
Wolford, Virginia

Virginia Crews Coal Company
Alpine No. 1
Iaeger, West Virginia

Millburn Coal Company
Millburn Colliery No. 4
Burnwell, West Virginia

Imperial Coal Company
Imperial No. 14
Burnwell, West Virginia

Imperial Coal Company
Imperial No. 20
Burnwell, West Virginia

Millburn Coal Company
Millburn Prep Plant
Burnwell, West Virginia

Eskdale Coal Company
Eskdale Plant
Burnwell, West Virginia

Beckley Coal Mining Company
Beckley Coal
Glen Daniel, West Virginia

WELCOME NEW MEMBERS

Slab Fork Coal Company
Slab Fork Coal
Slab Fork, West Virginia

Long Branch Energy Company
Long Branch
Danville, West Virginia

Maiden Mining Company Inc
Maiden Mining
Maidsville, West Virginia

Maidsville Coal Company Inc
Maidsville Coal
Maidsville, West Virginia

Consolidation Coal Company
Shawnee Strip
Horsepen, Virginia

Kleen Coal Company
Kleen Coal
Kingwood, West Virginia

Patriot Coal Company
Patriot Coal
Albright, West Virginia

Virginia Crews Coal Company
Virginia Crews
Iaeger, West Virginia

Black Maverick Coal Company
Black Maverick
Coaldale, West Virginia

Jewell Smokeless Coal Corp
Jewell Smokeless Safety Dept
Vansant, Virginia

Westmoreland Coal Company
Central Shop
Clothier, West Virginia

Westmoreland Coal Company
Ferrell No. 17
Madison, West Virginia

Westmoreland Coal Company
No. 3 Prep Plant
Clothier, West Virginia

Westmoreland Coal Company
Hampton No. 3
Clothier, West Virginia

New Elk Coal Company Inc
Cline No. 3
Gilbert, West Virginia

Gone Under Coal Company
Gone Under Coal
Oceana, West Virginia

M E D and H Coal Company Inc
M E D and H Coal
Davin, West Virginia

Southern Appalachian Coal Company
Hewitt 51 Surface
Julian, West Virginia

Southern Appalachian Coal Company
Bullcreek No. 4
Julian, West Virginia

Southern Appalachian Coal Company
Kimberly 35
Julian, West Virginia

Southern Appalachian Coal Company
Dicks Creek 36
Julian, West Virginia

Southern Appalachian Coal Company
5 Block No. 2
Julian, West Virginia

Southern Appalachian Coal Company
Bullcreek Prep Plant
Julian, West Virginia

Bethlehem Mines Corporation
Bethlehem Surface
Van, West Virginia

WELCOME

NEW MEMBERS

Bethlehem Mines Corporation
Bethlehem Mine No. 131 & 132
Van, West Virginia

Dal-Tex Coal Corporation
Dal-Tex Coal
Sharples, West Virginia

Deep Ford Mining
Deep Ford
Logan, West Virginia

K C & D Coal Company
K C & D
Gilbert, West Virginia

Cumberland Coal Company
No. 5 Mine
Vansant, Virginia

Ridgeland Coal Company
Ridgeland
Pocahontas, Virginia

Banner Run Coal Company
Banner Run
Bluefield, West Virginia

C and A Coal Company
C and A
Bluefield, West Virginia

United Pocahontas Coal Co
United Pocahontas No. 6A
Crumpler, West Virginia

United Pocahontas Coal Co
United Pocahontas No. 10
Crumpler, West Virginia

United Pocahontas Coal Co
United Pocahontas No. 14
Crumpler, West Virginia

United Pocahontas Coal Co
U P No. 14 Tipple
Crumpler, West Virginia

United Pocahontas Coal Co
United Pocahontas No. 16
Crumpler, West Virginia

United Pocahontas Coal Co
United Pocahontas No. 19
Crumpler, West Virginia

United Pocahontas Coal Co
Crumpler Tipple
Crumpler, West Virginia

United Pocahontas Coal Co
Wyoming and Zenith
Crumpler, West Virginia

Curtis Coal Company
Curtis Coal
Danville, West Virginia

Wren Coal Company
Wren Coal
Camp Creek, West Virginia

Chaffe Mining Company
Chaffe Mining
Beckley, West Virginia

Low Ash Coal Company
Low Ash Coal
Iaeger, West Virginia

New River Fuel Inc
New River Fuel
Madison, West Virginia

Boone Energy Coal Company
Boone Energy
Madison, West Virginia

Barrett Fuel Corporation
Barrett Fuels
Beckley, West Virginia

Eastern Associated Coal Corp
Wells Complex Plant
Wharton, West Virginia

WELCOME NEW MEMBERS

McDaniel Mining Company
McDaniel Mining No. 2 Mine
Piney View, West Virginia

Empire Mining Inc
Empire Mining
Grundy, Virginia

Mine Technology
Mine Technology
Norton, Virginia

Pammlid Coal Company
Pammlid Coal
Summersville, West Virginia

Pyramid Mining Inc
Pyramid
Owensboro, Kentucky

West Virginia Department
of Mines/Paul Gillespie
Hugheston, West Virginia

Grimmett Brothers Inc
Snyder
Snyder, Texas

Bolt Mountain Energy
Bolt Mountain Energy
Danville, West Virginia

National Mines Corporation
No. 31 Mine
Wayland, Kentucky

National Mines Corporation
No. 32 Mine
Wayland, Kentucky

National Mines Corporation
No. 33 Mine
Wayland, Kentucky

National Mines Corporation
No. 34 Mine
Wayland, Kentucky

National Mines Corporation
No. 35 Mine
Wayland, Kentucky

National Mines Corporation
Stinson Prep Plant
Wayland, Kentucky

National Mines Corporation
Safety Department
Wayland, Kentucky

National Mines Corporation
Central Shop
Wayland, Kentucky

National Mines Corporation
Main Office
Wayland, Kentucky

Creighton Hills Coal Company
Carol Mine
Lardintown, Pennsylvania

Paramont Coal Company
Paramont Deep Mine Division
Wise, Virginia

Paramont Coal Company
Paramont Surface Division
Wise, Virginia

Paramont Coal Company
Paramont Coal Prep Plant
Wise, Virginia

Ridgeland Coal Company
Ramada No. 2
Thorpe, West Virginia

Ridgeland Coal Company
Ridgeland No. 3
Thorpe, West Virginia

December 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Questions and Answers of Rescue and Recovery Operations Following Coal Mine Fires and Explosions

These questions and answers were prepared originally in 1928 by a committee of the National Mine Rescue Association.

The object was to standardize the procedure in connection with the recovery operations following mine fires and explosions, and at the same time set up that which would be instructive in training new miners for this emergency work.

After gaining experience, these questions and answers have been periodically revised and brought up to date by a committee appointed for this purpose, assisted by the general membership of the National Mine Rescue Association.

This latest revision (1977) was dedicated to the miners who lost their lives during firefighting and rescue and recovery operations in the coal mines of the United States. It is the wish of the committee that this revision will help to prevent any more loss of life in this way.

MINE GASES

1. Q. NAME THE COMMON GASES FOUND IN COAL MINES FOLLOWING A MINE FIRE OR MINE EXPLOSION.

   A. Carbon monoxide, carbon dioxide, and methane, oxygen, nitrogen, hydrogen, and other hydrocarbons.

2. Q. WHAT IS A DANGEROUS MINE ATMOSPHERE?

   A. A dangerous mine atmosphere is one that is or is likely to become poisonous to breathe, deficient in oxygen, or explosive.

3. Q. WHAT IS THE PRINCIPLE COMBUSTIBLE GAS FOUND IN COAL MINES?

   A. Methane (CH_4) is the principle combustible gas found in coal mines.

4. Q. WHAT IS THE EXPLOSIVE RANGE OF METHANE-AIR MIXTURES?

   A. Five to 15 percent of methane in air is explosive.

5. Q. TO WHAT EXTENT MUST THE OXYGEN CONTENT BE REDUCED BEFORE AN EXPLOSION OF METHANE AND AIR IS IMPOSSIBLE?

   A. For a mixture of strictly methane and air, the oxygen content must be 12 percent or less. It is, however, significant to note that there is a combination of combustible gases following explosions and during fires, so the maximum allowable oxygen will vary according to variations in the combustible and inert gases.

-MORE-

6. Q. WHAT IS THE EXPLOSIVE RANGE OF CARBON MONOXIDE-AIR MIXTURES?

A. 12.5 to 74 percent carbon monoxide in air.

7. Q. WHAT IS THE EXPLOSIVE RANGE OF HYDROGEN-AIR MIXTURES?

A. Four to 74 percent hydrogen in air.

8. Q. TO WHAT EXTENT MUST THE OXYGEN CONTENT BE REDUCED BEFORE AN EXPLOSION OF HYDROGEN IS IMPOSSIBLE?

A. Five percent or less.

9. Q. NAME THE INERT GASES FOUND IN COAL MINES.

A. Carbon dioxide (CO_2) and nitrogen (N_2).

10. Q. STATE WHERE YOU WOULD GENERALLY FIND METHANE, CARBON MONOXIDE, AND HYDROGEN SULFIDE.

A. Methane may be found anywhere, but is most likely to be encountered in virgin coal, roof cavities, high places, abandoned workings, and places that are improperly ventilated. Carbon monoxide may be found in small quantities after blasting and will be found after an explosion or in the return from a mine fire. Hydrogen sulfide may be found in old pipelines, stagnant water, fire areas and occasionally in active workings, usually associated with broken bottom.

11. Q. WHAT GAS OR GASES SUPPORT COMBUSTION?

A. Only oxygen.

12. Q. HOW ARE PERSONS AFFECTED BY BREATHING THE VARIOUS GASES FOUND IN COAL MINES?

A. 1. A deficiency of oxygen in the air being breathed deprives the body of the oxygen required for normal life support. Noticeable symptoms such as faster and deeper breathing, dizziness, rapid heart beat, and headache occur when the air contains as little as 15 percent oxygen; unconsciousness may occur when the air contains nine percent oxygen; and life is greatly endangered when the air contains seven percent oxygen. A flame safey lamp will no longer burn when the oxygen content is below 16.25 percent.

2. Carbon monoxide breathed in air reduces the capacity of the blood to carry sufficient oxygen, which deprives the brain and body tissues of the oxygen they require for normal functioning. The generally accepted maximum allowable concentration for an eight hour exposure with normal oxygen is .005 percent. Somewhat higher concentrations may be considered allowable for short periods of exposure. For example, .04 percent can be inhaled for one hour, and .4 percent will cause death in less than an hour.

3. Hydrogen sulfide in very small amounts will cause irritation of the eyes and respiratory passages, including the lungs; concentrations as low as .07 percent will cause rapid unconsciousness, cessation of respiration, and death.

-MORE-

FIGHTING AND SEALING COAL MINE FIRES

13. Q. WHAT ARE THE MAJOR CAUSES OF FIRES IN COAL MINES?

A. Electricity, open flame, ignition of gas, explosives, cutting and welding, smoking and smokers' articles, spontaneous ignitions, friction, and surface fires communicated to underground workings.

14. Q. WHAT ARE THE USUAL METHODS OF CONTROLLING OR EXTINGUISHING MINE FIRES?

A. 1. Direct attack with water, chemcials, rock dust, or sand.
2. Foam.
3. Enclosing fire area with tight seals.
4. Flooding affected area or the mine.
5. Flushing enclosed area with silt or other material.
6. Enclosing fire area with inert barriers.
7. Inundating with inert gases.

15. Q. WHEN SHOULD YOU DECIDE TO SEAL A FIRE AREA OR MINE?

A. When it is no longer reasonably safe or feasible to fight the fire directly because of a build up of combustible gases, bad roof due to heat, insufficient firefighting materials, too large an area engulfed by fire, etc.

16. Q. WHAT IS THE OBJECTIVE OF SEALING?

A. The object is to control and extinguish the fire by cutting off the oxygen supply so as to reduce the oxygen below that which will support a flame or combustion; also to minimize or eliminate the possibility of an explosion.

17. Q. WHAT ARE THE PRINCIPLE HAZARDS IN SEALING A MINE FIRE?

A. When coal burns, explosive and asphyxiating gases are liberated or produced and the heat from fires causes roof falls. Therefore, the installation of seals, the roof falling, or other firefighting activity may cause an explosive mixture of gases to reach the fire causing an explosion. In addition, there is a potential for workers to be overcome by asphyxiating gases because of the need to work in the return airways and because of roof falls changing the pattern of ventilation. It is important that the air returning from the fire area be monitored for explosibility.

18. Q. SHOULD THE INTAKE OR RETURN BE SEALED FIRST, OR BOTH TOGETHER?

A. No fixed rule should be established for sealing, but the procedure must be governed by the conditions surrounding each fire. It is, however, preferable to erect both intake and return seals simultaneously. It may even be advisable to devise a method of having doors in the seals closed after all workers have returned to the surface.

-MORE-

19. Q. WHAT DISTANCE SHOULD SEALS BE FROM A FIRE?

A. Conditions govern this. As the objective in sealing is to cut off the air so that oxygen will be consumed to the point that there is not enough oxygen to support combustion, the smaller the area sealed, the quicker this will be accomplished. Roof conditions, amount of combustible gases being given off, the intensity of the fire, and the number of seals required are the principle factors to be considered when selecting seal locations.

20. Q. SHOULD TEMPORARY SEALS BE ERECTED FIRST?

A. Not necessarily. Circumstances surrounding each fire will determine whether or not temporary seals should be erected. Factors to be considered when making this determination are the availability of permanent sealing material, the rate of rise of combustible gases, the rapidity of the spread of the fire, the accessibility of the seal locations, etc.

21. Q. WHAT MATERIALS SHOULD BE USED FOR TEMPORARY SEALS?

A. The most common and practical materials are those normally used within the mine such as brattice cloth, brattice boards, plastic material, and other sealing materials. Whatever the materials used, the edges should be sealed with urethane foam or other material to make them as air tight as possible.

22. Q. SHOULD WORK CONTINUE IN THE MINE AFTER SEALS ARE COMPLETED?

A. Emphatically, no! The main hazard after sealing a mine fire is the possibility of an explosion within the sealed area. All miners should be removed as quickly as possible after completion of work on the seals. Normally, no one should enter the mine when it is known that there is an explosive atmosphere within the sealed area. Samples to determine whether or not the atmosphere is explosive should be collected through boreholes from the surface whenever possible. Otherwise, the first trip into the mine after sealing should be for the purpose of collecting samples from the sealed area. The number of people making this trip should be limited to as few as necessary and how soon the trip should be made after seals are completed will depend to a large extent upon the size of the sealed area, the amount of combustible gases in the area when the seals were constructed, and the normal methane liberation in the area.

23. Q. WHAT ARE THE MAIN FACTORS TO BE CONSIDERED IN ERECTING PERMANENT SEALS?

A. They should be as air tight as possible and strong enough to resist slight concussions by being constructed of brick, tile, cement blocks layed in cement mortar and notched into the floor, ribs, and roof. Selected seals should be provided with a door that can be used for exploration or ventilation during recovery work. Selected seals, particularly those at high and low elevation points, should be equipped with sampling pipes or tubing with valves that extend through the seals at least into or beyond the first intersection. A thermocouple should also be placed at or near the fire area with connection to the outer side of one of the seals.

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UNSEALING FIRE AREAS IN COAL MINES

24. Q. WHAT DOES THE PRESENCE OF CARBON MONOXIDE IN SEALED AREAS INDICATE?

A. The presence of carbon monoxide is an indication of an active or recently active fire.

25. Q. HOW MUCH OXYGEN IS CONSIDERED REASONABLY SAFE BEFORE ATTEMPTING TO UNSEAL A FIRE?

A. The amount of oxygen under these circumstances is critical because of the possibility of explosion when unsealing a fire area. Ideally, the oxygen content should be such that the atmosphere in the sealed area is not explosive and cannot become explosive when air is added. Where this is not possible, the procedure for recovery should insure that miners are not in the mine when an explosive mixture exists in the sealed area unless the area has been examined and there is no fire.

26. Q. WHAT ARE THE PRINCIPLE FACTORS THAT GOVERN THE AMOUNT OF TIME A FIRE AREA MUST BE SEALED BEFORE BEING REOPENED?

A. Some principle factors are: Tightness of seals and enclosed area; influence of barometric pressure on enclosed area; character of burning material and overlying strata; extent and intensity of fire; location of seals with respect to mine ventilation; the extent of the area under seal; composition of gases in the sealed area.

27. Q. HOW WOULD YOU DETERMINE WHEN IT IS SAFE TO REOPEN A SEALED FIRE AREA?

A. When the temperature reaches normal and there is no carbon monoxide in the sealed area, it can be assumed that there is no longer active fire. There must be a sufficient period of time allowed for the area under seal to cool after the fire is extinguished before recovery operations begin. In addition, the atmosphere in the sealed area and procedure for recovery should be such that an explosive mixture will not be present in the sealed area while miners are in the mine unless the entire area has been examined and no fire exists.

28. Q. WHAT EFFECT, IF ANY, DOES THE PRESENCE OF CARBON DIOXIDE THAT IS PRODUCED IN THE SEALED AREA HAVE ON THE FIRE?

A. The amount of carbon dioxide present under these circumstances would have very little effect on the fire, but is a factor to be considered in determining whether or not the atmosphere is or may become explosive. Carbon dioxide may be introduced into a sealed area to help control the fire and help create an inert atmosphere.

29. Q. WHAT ARE SOME OF THE PREPARATIONS THAT SHOULD BE MADE BEFORE UNSEALING A FIRE AREA?

A. A complete and detailed plan should be prepared and agreed to by various interested parties. Necessary adjustments should be made in the ventilation to assure that an ample quantity of air

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will be available and that the air that passes by or through the sealed area is conducted in such a manner that it will not pass over power wires or any other potential ignition source and shall be directed by the shortest means to the surface. The area adjacent to the seals should be heavily rock dusted. The tools and supplies that will be needed should be placed at convenient locations.

30. Q. BRIEFLY DESCRIBE TWO METHODS THAT HAVE BEEN SUCCESSFULLY EMPLOYED FOR THE RECOVERY OF A FIRE AREA.

A. There are, in general, two systems that may be employed:

1. Recovering the fire area in successive blocks by means of air locks.
2. Reventilation of the fire area after there is conclusive evidence that the fire has been extinguished, or that the atmosphere is not explosive and will not become explosive with the addition of air.

31. Q. DESCRIBE THE METHOD OF RECOVERING A SEALED FIRE AREA BY THE USE OF AIR LOCKS.

A. The purpose of air locking is to recover portions of the sealed fire area or the entire area in a manner that will prevent increasing the oxygen content in unexplored areas to avoid an explosive atmosphere or rekindling or intensifying the fire.

When a suitable air lock has been erected, a proper organization and proper and adequate equipment and material provided, and all other necessary arrangements are completed, an oxygen breathing apparatus crew, fully equipped for the work at hand and supported by a fully equipped reserve crew, should enter the air lock through a man door and remove the seal.

After the seal has been removed, an oxygen breathing apparatus crew, with another crew in reserve, should advance and explore to the point where the next air lock is to be erected. General conditions should be observed by the exploring crew, temperature readings taken, an air sample collected to check previous analysis, measurements made for material required to construct the inby seals of the next air lock, then return to the fresh-air base. An apparatus crew or crews, with a reserve crew at the fresh-air base, should then construct a temporary seal with a door in it at the place previously selected for the next air lock, erect necessary temporary seals in crosscuts or other openings on the intake side and on the parallel entry or entries on the return side opposite the point selected for the air lock to insure resealing of the inby area, and examine any unexplored parts of the isolated area for possible fires. All crews should then be withdrawn from inside the air locks. Next, a seal on the return side should be opened by an apparatus crew; the air-lock doors on the intake side should be opened and air admitted to reventilate the area inside the air locks. Stoppings should be erected in open crosscuts on the return side to advance fresh air to the last crosscut which should be left open to provide a return. The quantity of air should be so regulated that the return will be kept below the lowest explosive limit.

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After the newly explored area has been reventilated, fresh-air workers should erect a tightly constructed stopping with a door in it a suitable distance outby the one previously built to form the next air lock.

Advances as described above should be made by successive blocks until the entire area is recovered. As the work progresses, frequent analyses should be made to determine the composition of the atmosphere within the sealed area. The oxygen should be kept under control and within safe limits at all times. It is imperative that the oxygen be kept as low as possible at all times by limiting the infiltration of air to the sealed area as the work progresses.

32. Q. DESCRIBE THE METHOD OF RECOVERING A SEALED FIRE AREA BY DIRECT VENTILATION.

A. When a decision has been made to recover a sealed area by direct ventilation, an air lock should preferably be constructed near the intake seal. A rescue crew fully equipped for the work at hand breaks the seal, enters, observes conditions, takes temperature readings and air samples, and returns to the fresh-air base. If the observations and examination of the affected region have shown that conditions are favorable, the return seal should be broken by an apparatus crew, then the air lock opened to admit air. While the area is being ventilated, the combustible gases in the main return should, if feasible, be kept below the explosive limit. If this method of recovering a fire area is employed, it is advisable that all miners be out of the mine before the air is actually directed into the sealed area, unless it has been determined that the atmosphere in the sealed area is not explosive and cannot become explosive by adding air. Some automatic arrangement should be employed which would give sufficient time for all persons to reach the surface before the fire gases were actually moved. A reasonable period should be given for the fire gases to be removed and frequent determinations should be made of the return from the mine, and the time for any person to enter should be governed by the quality of the return air. If the workings under seal are of an extensive nature, it will probably be advisable for crews equipped with oxygen breathing apparatus to reenter the mine and clear out pockets of standing fire gases that may be present.

MINE EXPLOSIONS

33. Q. WHAT ARE THE PRINCIPAL CAUSES OF MINE EXPLOSIONS?

A. Ignition of methane or coal dust or both by electric arc, open flame (including mine fires), misuse of explosives, friction, etc.

34. Q. HOW CAN MINE EXPLOSIONS BE PREVENTED OR THEIR EFFECT MINIMIZED?

A. By adequate ventilation properly distributed, directed and controlled; complete rock-dusting of all open areas; use of sufficient water to allay dust from mining machines at working faces; use of permissible electrical equipment; use of permissible explosives, together with proper and adequate supervision to see that the above safeguards are instituted.

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PROCEDURES AND DUTES AT FIRES AND EXPLOSIONS

35. Q. IN CASE OF A MINE FIRE OR EXPLOSION, WHO SHOULD BE NOTIFIED?

A. Notify as soon as possible: higher company officials, State mining agency, Federal mining agency, representative of mine workers, safety department, engineering department, and maintenance department. Also, adjoining mines should be notified for possible assistance or to alert them if they are connected underground with the affected mine.

36. Q. WHAT ARE SOME FACTORS THAT MUST BE CONSIDERED EARLY TO ASSURE A WELL ORGANIZED OPERATION?

A. Rope off and have police guard all roads leading to the mine. Establish a base of operation with ample room and communications. Establish special check procedures for acquiring necessary supplies.

37. Q. WHAT ONE FACTOR IS MOST CRITICAL TO INSURE THE SAFETY OF SURVIVORS IN THE MINE?

A. The mine ventilation. The fan or fans should be examined and repaired as necessary, then attended or other action taken to assure continued operation.

38. Q. A MAJOR FACTOR TO BE CONCERNED WITH DURING RECOVERY FOLLOWING AN EXPLOSION IS THE POSSIBILITY OF ANOTHER EXPLOSION. LIST THE METHANE IGNITION SOURCES WHICH ARE MOST LIKELY TO BE ENCOUNTERED IN THE AFFECTED AREAS THAT HAVE NOT BEEN EXPLORED AND VENTILATED.

A. 1. Fire that was started by the explosion.
2. Electrical arc that may be created by short-circuited batteries, or power wires that have not been deenergized.

39. Q. IN ADDITION TO ASSURING THAT THE FAN OR FANS ARE OPERATING, WHAT IS ANOTHER IMPORTANT STEP TO BE TAKEN IN THE ATTEMPT TO SAVE SURVIVORS?

A. Endeavor to communicate with survivors and direct them to the best means of escape from the mine.

40. Q. WHAT ARE THE MAIN OBJECTIVES OF THE RESCUE AND RECOVERY WORK AFTER A MINE EXPLOSION?

A. 1. Miners entombed or missing should be located and brought to safety or their bodies recovered as soon as possible.
2. Incipient or active fires should be located and extinguished or sealed off before an air current--possibly laden with explosive gas--is turned upon such a fire. If fire exists, unrestricted restoration of ventilation may fan it to greater intensity and make extinguishing it more difficult; or an explosion may occur, killing some or all of the miners still alive in the mine.
3. Normal ventilation should be restored to all parts of the mine and all noxious gases swept out after the danger of fire has been found nonexistent or under control.

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41. Q. WHILE FIGHTING A MINE FIRE, WHAT TYPE OF MAJOR ACCIDENT SHOULD THE FIREFIGHTERS BE MOST CONCERNED WITH?

A. An explosion is the major accident that is likely to occur during firefighting operations.

42. Q. HOW SHOULD MINE FIREFIGHTERS PROTECT AGAINST THE OCCURRENCE OF AN EXPLOSION?

A. The air returning from the fire should be monitored for explosibility, and ventilation should be controlled closely and maintained over the fire constantly.

43. Q. SHOULD ONE PERSON BE IN CHARGE OF THE RESCUE OR RECOVERY WORK?

A. Yes, generally a representative of the company.

44. Q. SHOULD THERE BE AN ADVISORY COMMITTEE TO THE PERSON IN CHARGE OF THE RESCUE OR RECOVERY WORK?

A. Yes. The committee should be composed of representatives of the State mining agency, Federal mining agency, the miners, and others.

45. Q. SHOULD THERE BE A PLAN MADE FOR SPECIFIC PHASES OF FIREFIGHTING RESCUE AND RECOVERY PROCEDURES SUCH AS SEALING OR UNSEALING MINE FIRES OR RECOVERY OF MINERS FOLLOWING AN EXPLOSION?

A. Yes. The person in charge and the advisory committee should devise a relatively broad plan of operation which should be followed closely.

46. Q. WHAT ARE SOME FACTORS THAT MAY BE CRITICAL TO THE SAFE FIREFIGHTING OR EXPLOSION RECOVERY ACTIVITIES, AND WHICH WOULD NOT NORMALLY BE KNOWN OR READILY AVAILABLE TO THE PLANNERS?

A. Location of all energized power wires or equipment; location of all battery equipment or equipment on which batteries are installed; location of diesel equipment; location of explosives or oil storage areas; location of pressurized containers, such as acetylene or oxygen cylinders; and the location and description of any other equipment or supplies that may influence the planning.

47. Q. HOW SHOULD THE WORK BE DIVIDED?

A. Preferably, in four six-hour shifts per day, and the change of shift should take place underground at the fresh-air base or other work site so that work will be continuous.

48. Q. SHOULD THERE BE A PERSON IN CHARGE OF THE UNDERGROUND WORK ON EACH SHIFT?

A. Yes, generally a company representative with experience in such work.

49. Q SHOULD THERE BE AN ADVISORY COMMITTEE TO THE PERSON IN CHARGE ON EACH SHIFT UNDERGROUND?

A. Yes. A committee should be composed of representatives of State mining agency, Federal mining agency and others as appropriate.

50. Q. SHOULD THERE BE ANY RESTRICTION ON THE NUMBER OF PEOPLE PERMITTED UNDERGROUND?

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A. Yes. Only those people necessary to insure the suitable progress and safety of the operation which would include supply people, backup workers, supervisors, etc.

51. Q. AFTER ENTERING A MINE FOLLOWING AN EXPLOSION, WHAT EXAMINATIONS SHOULD BE MADE?

A. Examine return airways for smoke or other indications of active fire.

52. Q. FOLLOWING AN EXPLOSION, HOW IS THE LOCATION OF THE FIRST FRESH-AIR BASE DETERMINED?

A. Exploration is continued in intake air to the point where normal ventilation controls have been destroyed and ventilation is short circuited. At this point, the first fresh-air base should be established.

53. Q. DESCRIBE A FRESH-AIR BASE.

A. The place to which fresh air has been conducted, and at which stoppings (seals) or other ventilation controls including an air lock have been installed in a manner that will prevent reventilation of any area that has not been explored and examined.

54. Q. WHEN SHOULD THE FRESH-AIR BASE BE ADVANCED?

A. Only when an area inby the present fresh-air base has been examined and stoppings installed to permit the explored area to be reventilated without disturbing the inby area that has not been explored.

55. Q. SHOULD EXPLORATION TRIPS BE MADE AHEAD OF THE FRESH-AIR BASE OR IN OTHER AREAS WHERE AN IRRESPIRABLE ATMOSPHERE IS OR MAY BE PRESENT?

A. Yes. Crews wearing self-contained breathing apparatus should make such trips for gathering information, reestablishing ventilation, rescuing workers, searching for bodies, etc.

56. Q. WHAT SHOULD BE THE DISTANCE OF TRIPS AHEAD OF FRESH AIR?

A. The object of the excursion; the type of communication used; conditions (such as height) of travelway, etc. will govern the distance to be traveled; always keeping in mind the time limitation of the apparatus.

57. Q. UNDER WHAT CONDITIONS IS IT NOT ADVISABLE FOR BREATHING APPARATUS CREWS TO MAKE TRIPS AHEAD OF FRESH AIR?

A. Such exploration trips should not be taken under the following conditions:

1. In dense smoke, except with life line attached to each member and then only for very short trips to save life, turn valves, or to open or close doors essential to the operation.
2. When an explosion is probable.
3. In dangerously high temperature with high humidity.
4. With apparatus not adequately charged or in unsafe condition.
5. When the reserve crew has less members than the advance crew.

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58. Q. WHAT KIND OF MATERIAL SHOULD BE USED TO BUILD TEMPORARY STOPPINGS?

A. Workers wearing breathing apparatus should install temporary stoppings with plastic material, pogo sticks, inflatable stoppings, etc. Such stoppings should be replaced as soon as possible with more substantial stoppings such as cement block, wood-framed plastic sealed with rigid foam, or other more permanent type structure.

59. Q. WHAT SHOULD BE DONE BY BREATHING APPARATUS CREWS WHEN FIRES ARE FOUND DURING EXPLORATION?

A. Every effort should be made to reach and extinguish all fires discovered. If this is not possible, the crew should return to the fresh-air base and report the condition.

60. Q. SHOULD THERE BE A TELEPHONE OR OTHER MEANS OF COMMUNICATING BETWEEN THE FRESH-AIR BASE AND THE OUTSIDE?

A. Yes, so that miners and material can be provided without delay and that instruction and information can be relayed promptly between the person in charge underground and the person in charge on the surface.

61. Q. SHOULD THE PERSON IN CHARGE OF EACH SHIFT HAVE A MAP OF THE MINE?

A. Yes, so that progress can be followed, plans can be made, and information can be relayed accurately.

62. Q. SHOULD INFORMATION BE RELAYED TO RELATIVES OF POSSIBLE VICTIMS AND TO THE NEWS MEDIA?

A. Yes. Normally one spokesperson should be selected to relay factual information about the operation.

63. Q. WHAT SHOULD THE ENGINEERING DEPARTMENT BE RESPONSIBLE FOR DURING FIREFIGHTING OR RECOVERY OPERATIONS AFTER AN EXPLOSION?

A. 1. Provide up-to-date maps of the mine showing normal ventilation and ventilation controls (stoppings, overcasts, etc.).
2. Keep map current by recording progress, changes in ventilation, and other pertinent information such as location of bodies, equipment, etc.

64. Q. FOLLOWING A MINE EXPLOSION, WHAT EARLY ACTION SHOULD THE ELECTRICAL DEPARTMENT TAKE?

A. 1. Disconnect and lock out all electric power entering the mine or affected portions when authorized to do so, and lock out all other deenergized circuits.
2. Notify the electric company that under no circumstances should the electric power be "cut off" without notifying the mine.
3. If it is a shaft or slope mine, examine and service necessary hoists and elevators.

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65. Q. WHAT ARE SOME OF THE DUTIES OF THE SAFETY DEPARTMENT DURING THE EARLY STAGES OF FIREFIGHTING OR EXPLOSION RECOVERY OPERATIONS?

A. Make arrangements for rescue teams including facilities and maintenance of equipment, food and lodging. Arrange for medical or first-aid treatment for injured persons or handling of bodies if necessary.

66. Q. WHAT MAIN TYPES OF WORKERS SHOULD BE ON EACH SHIFT?

A. Crews with breathing apparatus, crews to build stoppings, and crews to transport and handle supplies.

67. Q. WHAT ATTRIBUTES SHOULD A PERSON HAVE BEFORE BEING SELECTED AS A MINE RESCUE TEAM MEMBER?

A. The person selected should be a cool, competent person who has demonstrated in the past a willingness to be a good "team" member. The person should also possess extensive knowledge of mining and should be mentally sound and physically fit.

68. Q. WHAT TRAINING SHOULD A MINE RESCUE TEAM MEMBER HAVE BEFORE BEING QUALIFIED TO PARTICIPATE IN MINE RESCUE WORK?

A. They should be trained and retrained in accordance with Federal or State requirements for qualification.

69. Q. HOW MANY PEOPLE CONSTITUTES A RESCUE TEAM?

A. At least five and preferably six people should compose a rescue team with the same number fully equipped at the fresh-air base. A crew of less than five may make short excursions for special purposes when a similar number of apparatus miners are in reserve at the fresh-air base.

70. Q. WHAT EQUIPMENT SHOULD RESCUE PARTIES HAVE WITH THEM?

A. In addition to the standard equipment such as electric cap lamps and self-rescuers, they should be equipped with approved self-contained breathing apparatus that have been properly tested and inspected under the supervision of a competent person. They should have all the pertinent background information, a copy of the latest map of the mine workings, and at least an approved and tested methane detector, carbon monoxide detector, and oxygen detector.

71. Q. WHAT SHOULD THE CAPTAIN OF AN APPARATUS CREW CONFIRM BEFORE LEAVING THE FRESH-AIR BASE?

A. Make sure that all apparatus are operating properly and check to see that all material necessary for the exploration is on hand and working. The captain should consult with the person in charge relative to the purpose of the trip and extent of travel; also, be sure that a backup rescue team with all necessary equipment is in readiness at the fresh-air base.

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72. Q. HOW SHOULD THE EXPLORATION AHEAD OF THE FRESH-AIR BASE BE CONDUCTED?

A. The rescue crew should advance in single file with six-foot intervals between members; carefully examine roof and roadway; check for toxic and flammable gases and oxygen; mark clearly for retreat your route of travel; mark on map and/or pad the conditions and materials found.

73. Q. WHAT COMMUNICATIONS SHOULD BE MAINTAINED WITH RESCUE TEAM AND FRESH-AIR BASE?

A. They must be in contact with the fresh-air base at all times, either by sound system or prearranged signals when a life line is used.

74. Q. WHAT LIFE LINE SIGNALS ARE RECOMMENDED FOR USE BETWEEN THE RESCUE CREW AND THE FRESH-AIR BASE?

A. For the purpose of standardizing signals on the life line, the following signals from the team to the fresh-air base or from the fresh-air base to the team are recommended for use: 1 pull--stop traveling or "all right" if at rest; 2 pulls--advance; 3 pulls--retreat (from fresh-air base to team--return at once); 4 pulls--distress. Horn or other audible signals between team members will be the same. Crew will keep life line stretched or taut at all times in order to be able to give or receive signals. When the crew is returning, the line should be rewound on the reel as they return.

75. Q. SHOULD APPARATUS CREWS RECOVER BODIES FROM UNVENTILATED AREAS?

A. Ordinarily, anyone encumbered with apparatus should not exhaust their strength in carrying bodies any great distance to fresh air.

December 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

The Silent Killer

Carbon monoxide is a gas which has neither color nor odor. Because it cannot be recognized by any of the human senses, it has been called the silent killer. Poisoning results from inhalation of the gas as the carbon monoxide combines with the hemoglobin of the blood. This action excludes oxygen and the victim suffocates. Carbon monoxide is very dangerous because even a small percentage in the air can cause sickness, and higher percentages can cause death.

Carbon monoxide is generated by the combustion of common fuels. It is produced by improperly adjusted oil and gas burners; by coal, coke, or charcoal fires when there is not enough air over the surface of the fire bed; and by internal combustion engines.

Because carbon monoxide is generated by incomplete combustion of fuels, cases of carbon monoxide poisoning increase during the cold-weather months when more fuel is used, both on and off the job. The generation of carbon monoxide cannot be stopped; so, make sure that the gas generated is piped to some point where it will not harm anyone, or that sufficient ventilation is provided to prevent the build-up of poisonous concentrations.

Burners and flues require proper maintenance to assure that the fuel burns efficiently and that the waste gases are carried away. DON'T ever permit the use of an open salamander in an enclosed area. See that it is equipped with a flue to the outside; or, if this is not practical, move the salamander to an area with sufficient ventilation.

The exhaust systems of internal combustion engines, both automotive and industrial, should be inspected frequently for leaks; if faulty parts are detected, have them replaced immediately. Remember, too, that no one should ever run an automotive engine in a closed garage. Finally, even though the exhaust system of an automobile has been recently inspected, it's impossible to tell when a leak might develop; hence the automobile should never be driven with all the windows closed.

December 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Don't Overlook "Minor" Accidents

The importance of investigating so-called "minor accidents" is often overlooked by safety engineers. No doubt this is because the engineer is measuring severity by dollars and cents instead of by hazards and loss potential.

The term "minor accident" is a misnomer. Experienced safety engineers know that while there are minor injuries, there is no such thing as a "minor accident." The injury resulting from an accident sequence in no way indicates the severity of the hazard that produced it. Only investigation will determine this.

Safety studies reveal that once an accident sequence is set in motion, the degree of the resultant injury can neither be controlled nor predicted. In accident-prevention work, the importance of any accident lies in its potential for creating injury and not in the fact that it actually does or does not.

Many accidents do not result in injury or damage and are therefore called "near misses." These near misses should likewise be investigated and preventative comment made, because they represent a loss potential. In short, the attention of every engineer should primarily be directed to the cause of the accident -- not to the injuries or damage they cause.

TEN COMMANDMENTS OF SAFETY

I. Correct or report unsafe conditions, equipment, and tools.

II. Follow instructions, do not take chances; if you do not know--ask!

III. Do your part to keep everything clean and orderly.

IV. Use the right tools and equipment for the job; use them safely.

V. Use and repair equipment only when authorized.

VI. Use protective equipment; wear safe clothing.

VII. Do not commit horseplay; avoid distracting others.

VIII. When lifting, bend your knees; get help for heavy loads.

IX. Abide by all safety rules and signs; use common sense.

X. Report all injuries promptly; get first aid quickly.

December 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Take Care To Insure A HAPPY HOLIDAY

We look forward to holidays. We plan for them in advance -- for weeks or even for months. We like to have them come so we can make it a long weekend. That's the way it should be.

There's a catch, though. The holiday we looked forward to may not work out the way we planned. Many things can happen to make it go wrong, but the worst of all is a bad accident -- the kind where someone is hurt or even killed.

This country has a terrible traffic accident record. Last year thousands were killed and well over a million disabling injuries occurred. Many hundreds of thousands had to be patched up in hospitals. A lot of the victims are crippled for the rest of their lives.

It isn't all caused by wild drivers, nor by heavy drinkers, although liquor plays an awful part in many of the worst accidents.

Too many accidents are the fault of ordinary everyday drivers who simply don't take their driving seriously enough. This shows up on weekends and particularly on long holiday weekends.

Just when everyone should put safety first, some drivers seem to think that getting there quickly is more important. They drive at speeds too high for conditions, especially hazardous winter weather. They take chances in passing. They cut curves. They crowd stop lights and pass stop signs, when they think they can get away with it.

Every one of them knows better -- or did before becoming involved in an accident. Such a driver's big mistake was not being safety-minded.

This safety consciousness wasn't there when it was needed most -- on the holiday.

In the fall, during hunting season, many accidents occur because hunters do not take all the precautions involved with guns.

During summer, others pour gasoline or kerosene on a barbecue to make it burn better. Sometimes it burns too well.

The thing that runs through all these accidents is that a little safety mindedness and the use of good common sense would have prevented them. This applies even to the freakish ones.

Very few people carry on activities on their holidays that are really dangerous. But everyone does things that can cause an injury if no thought is given to safety. Over and over again, the accidents prove it!

December 1982

HOLMES SAFETY ASSOCIATION MONTHLY SAFETY TOPIC

Before Christmas

This holiday time is a period of many varied activities both at home and elsewhere. The Holmes Safety Association wishes each of you a Merry Christmas and a Happy New Year. But, much of this happiness depends to a great extent on your individual work habits for this and the coming months.

There is considerable excitement during the month of December and the tempo increases to the day of celebration, Christmas Day. We are each caught up in the excitement of this festive season. Some of us might wish to pause, even during our working hours, and reflect on some activity planned or anticipated for Christmas, but you must resist this temptation or you may do something to injure yourself or some other person.

We each must face reality for we are concerned with earning a living for our families, and, in order to do this, we must be constantly alert to all possible hazards and keep in mind safe work practices. Any thoughts concerning outside activities should be placed in the backs of our minds and full attention centered on work duties.

Unfortunately, before, Christmas has not always been a happy one in the mining industry. This sobering thought should be a constant reminder to us that we each should always stay alert to our surroundings and perform our duties in the safest manner possible. Make Certain that everything is correct!

If you will always give your fullest attention to the various jobs at hand, then we can look forward to many glorious seasons such as the current one.

THE LAST WORD

DECEMBER

CORNUCOPIA

The turkey is not always the only casualty of the holiday.

Too often the family cook spends all day preparing the feast and then is unable to enjoy it because of an accident in the kitchen, the most dangerous room in the house. With organization and precaution the chef can be assured a safe and tranquil celebration by following these simple suggestions.

Get preparations organized a few days ahead of time. See that cooking utensils are convenient and in good condition. Any dishes that can be prepared in advance, should be fixed the day before and stored in the refrigerator.

Delegate specific before-dinner jobs to one or two helpers. Planning ahead saves nerves and time and prevents accidents caused by haste.

Keep "tasters" of all ages out of the kitchen. Because kitchens today are built compactly for efficiency and not for entertaining, a crowd results in confusion. This is the perfect setup for accidents.

And, remember to always follow these simple turkey tips:

T-Turn pot handles parallel to the front of stove.
U-Use pot holders.
R-Remember to wipe up spills immediately.
K-Keep cupboard doors closed.
E-Eliminate all tripping hazards.
Y-Youngsters should be kept out of the kitchen.

'TIS THE SEASON

Decking the halls for Christmas requires more than a creative hand with boughs of holly. Christmas decorations must be selected with safety in mind and used with care.

'Tis the
Jolly...
SAFE, too!

Christmas tree fires, a major holiday hazard, turn the season into a time of tragedy for more than a thousand families annually.

If you're going to have a natural tree, purchase a fresh one with springy branches and tight, green needles. Leave the tree outdoors in water or snow as long as you can.

Check strings of electric lights for worn insulation, broken plugs and loose bulb sockets. Replace damaged parts immediately.

Keep tree away from fireplace, radiator or other heat sources.

Never burn evergreen boughs or gift wrappings in the fireplace.

safety!
safety
safety
safety

The giving and receiving of gifts is one of the high points of the holiday festivities-especially for the youngsters. Don't spoil the fun by giving an unsafe gift.

F-Find playthings that do not have points, sharp edges or removable parts.
U-Understand the abilities and age of the child and select your gift accordingly.
N-Note the Underwriter's Laboratories (UL) label on electrical toys.

And remember the best Christmas gift of all is LIFE.

The Holmes Safety Association
wishes you joy and safety throughout the year
MERRY CHRISTMAS!!

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